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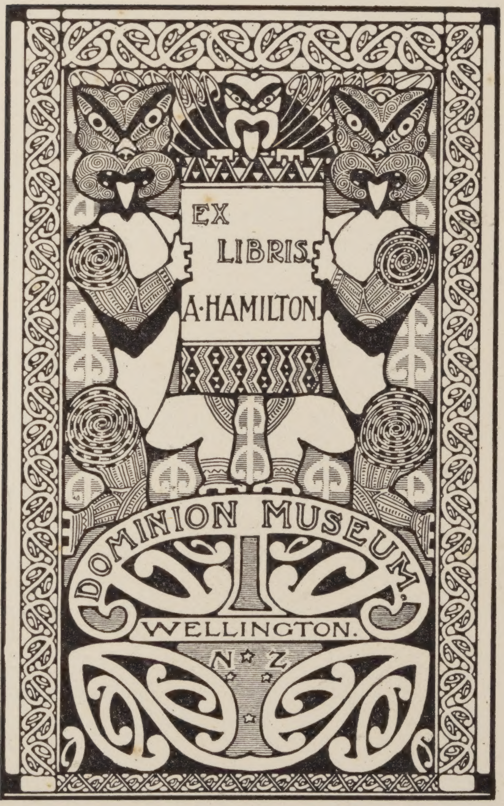

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NOTE PRÉLIMINAIRE
sur la
FAUNE MALACOLOGIQUE TERRESTRE ET FLUVIATILE
de la Nouvelle-Zélande et sur ses affinités

PAR

H. CROSSE

Lorsque nous avons, il y a quelque temps, prié M. Henri Suter de vouloir bien nous donner, pour le *Journal de Conchyliologie*, une Liste synonymique et bibliographique des Mollusques terrestres et fluviatiles de la Nouvelle Zélande, qu'il connaît assurément mieux que personne, MM. Hutton, Hedley et Pilsbry exceptés, notre honorable confrère de Christchurch, tout en accueillant notre demande avec son obligeance accoutumée et en nous envoyant son travail, n'a pu, faute de temps, y joindre des observations préliminaires sur les principaux caractères que présente la faune malacologique des grandes îles Néo-Zélandaises, ni sur ses affinités. Il nous a prié de vouloir bien le remplacer, sous ce rapport, et nous a autorisé à nous servir, à cet effet, des quelques notes que contenait sa correspondance.

Jusqu'à ces dernières années, la Nouvelle-Zélande n'était guère représentée, dans les collections conchyliologiques, que par deux espèces terrestres, toujours invariablement les mêmes, le *Placostylus bovinus* de Bruguière, connu depuis 1792, et le *Paryphanta Busbyi* de Gray. Ce dernier auteur avait bien donné, en 1843, une liste de 15 espèces (1), auxquelles, dans le courant de 1849, il en ajouta 14 autres (2), mais ces espèces étaient petites et de peu d'apparence ; elles ne pouvaient présenter de l'intérêt que pour ceux qui se seraient donné la peine de les examiner de près et de les étudier soigneusement ; elles furent donc longtemps négligées. Pourtant, les six premiers volumes de la Monographie des Hélicéens de Pfeiffer renferment déjà 73 espèces (3), qui, en 1868, se trouvent citées dans l'*Exchange List* du Dr Cox (4).

En 1873, le *Colonial Museum* de Wellington (Nouvelle-Zélande) publia simultanément deux catalogues : l'un, dressé par MM. Scott et Cox et contenant les descriptions des espèces de coquilles terrestres Néo-Zélandaises alors connues; l'autre consacré à un examen critique et synonymique de ces mêmes espèces par M. Ed. von Martens.

En 1880, M. Hutton fit paraître, sous le titre de *Manual of the New Zealand Mollusca*, un travail très complet, renfermant le catalogue et la description de toutes les espèces de Mollusques terrestres, fluviatiles et marines de la Nouvelle-Zélande. Le même auteur, en 1883, sous le titre de « *A. Revision of the Land Mollusca of New Zealand* (5) », publia un autre Mémoire très utile pour

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(1) *New Zealand Fauna in Dieffenbach's New Zealand*. 1843.
(2) *Proceed. Zool. Soc. London*, p. 164, 1849.
(3) *Monog. Heliceorum*, vol. I—VI, 1848-1868.
(4) Cox, *Exchange List*, 1868.
(5) *Trans. New Zealand Institute*, vol. XVI, p. 186, 1883.

l'étude de cette faune et résumant fort exactement l'état des connaissances, à cette époque.

Nous ne parlerons que pour mémoire des listes données, dans leur travail général sur la distribution géographique des Mollusques, en 1880, par le Docteur W. Kobelt (1) et, en 1881, par le Dr P. Fischer (2), ainsi que du Catalogue des Mollusques terrestres et fluviatiles de la Nouvelle-Zélande, dressé par M. S. Clessin, en 1888, d'après les travaux de W. Hutton, et publié par lui dans le dixième volume de la Nouvelle Suite des *Malakozoologische Blätter* (3).

Parmi les travaux plus récents, dont la faune malacologique terrestre et fluviatile de la Nouvelle-Zélande a été l'objet, nous citerons les suivants :

1° H. Suter. — Descriptions d'espèces nouvelles de coquilles terrestres et fluviatiles de la Nouvelle-Zélande, 1889 (4).

2° H. Suter. — Description d'espèces nouvelles de coquilles terrestres et fluviatiles de la Nouvelle-Zélande, 1890 (5). Ces deux Mémoires renferment d'intéressantes études sur l'armature linguale et la mâchoire des Mollusques Néo-Zélandais, en même temps que de nombreuses descriptions d'espèces nouvelles.

3° C. Hedley. — Distribution des *Placostylus*, étude de géographie zoologique ancienne, originale et très bien faite, 1892 (1).

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(1) *Jahrbücher der Deuts. Malak. Ges.*, vol. VII, p. 26, 1880.

(2) *Man. de Conchyliologie*, p. 256, 1881.

(3) *Malak. Blätter, Neue Folge*, vol. X, p. 175, 1888.

(4) *Descr. New Species of New Zealand Land a. Fresh-water Shells, in Trans. New Zealand Institute*, vol. XXII, p. 221, pl. XIV et XV, 1889.

(5) *Descr. New Spec. New Zealand Land a. Fresh-water Shells, in Trans. New Zealand Institute*, vol. XXIII, p. 84, pl. XVI, XVII, XVIII, 1890.

4° C. Hedley et H. Suter. — Liste de référence des Mollusques terrestres et fluviatiles de la Nouvelle-Zélande, 1892 (2). C'est le plus récent des catalogues parus jusqu'ici et, par conséquent, le plus complet.

5° H. A. Pilsbry. — Manuel de Conchyliologie. Dans le sixième volume des *Helicidæ*, en 1892 (3), et dans le septième, en 1893 (4), notre savant confrère de Philadelphie décrit et figure la presque totalité des *Helicidæ* Néo-Zélandais actuellement connus.

Dans tous les cas, il est certain que, grâce aux efforts et au zèle des naturalistes et des collecteurs locaux, l'état des connaissances, en ce qui concerne la Malacologie terrestre et fluviatile de la Nouvelle-Zélande, a considérablement progressé dans le cours des vingt dernières années. On a éliminé successivement les éléments faussement attribués à la faune Néo-Zélandaise, et qui en dénaturaient les caractères (notamment les genres *Testacella, Daudebardia, Diplomphalus, Vitrina, Nanina, Patula, Hyalinia, Zonites, Succinea, Pupa, Bulimus, Rhabdotus, Limax, Arion, Leptopoma, Cyclophorus, Physa et Neritina*). Il en résulte que l'on commence maintenant à pouvoir se faire une idée exacte de cette faune originale, de son caractère insulaire et de ses affinités zoologiques.

Au point de vue des Mollusques fluviatiles, elle est caractérisée par la présence du genre *Latia*, qui lui est

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(1) *The range of Placostylus; a Study in ancient géography, in Proc. Linn. Soc. N. S. W.*, Sér. 2, vol. VII, p 335, 1892.

(2) *Reference List of the Land and Fresh-water Mollusca of New Zealand, in Proc. Linn. Soc N. S. W.*, Sér. 2, vol. VII, p. 613, 1892.

(3) *Manual of Conchology*. — Sér. II. *Pulmonata*, vol. VIII (VI des *Helicidæ*), 1892.

(4) *Manual of Conchology*. — Sér. II. *Pulmonata*, vol. IX (VII des *Helicidæ*, 1893.

particulier, et peut-être aussi par celle du genre *Gundlachia*, bien qu'il ne soit pas absolument certain que l'espèce appartenant à ce dernier genre, qui a été trouvée dans l'île du Sud, ne constitue pas une importation de Tasmanie ; par celle des *Potamopyrgus*, des *Melanopsis*, genre bien peu répandu en Océanie, et enfin de quelques représentants du genre *Unio*. Ce qui caractérise la faune malacologique terrestre de la Nouvelle-Zélande, c'est d'abord le genre *Placostylus*, qui compte, dans l'île du Nord, le plus méridional et le dernier de ses représentants; puis le genre *Athoracophorus* ; la présence de nombreux Hélicéens de petite taille, appartenant aux genres *Flammulina*, *Endodonta* et *Laoma ;* celle d'une certaine quantité de petits *Zonitidæ*; et enfin le développement, relativement assez grand, pris par des genres appartenant à la famille des *Rhytididæ* et composés de Mollusques carnivores, présentant, en même temps que des coquilles du type hélicéen, une organisation de radule et de dents voisine de celle des *Testacella* et des *Glandina*. Ces genres sont au nombre de quatre : le g. *Rhytida*, qui comprend 6 espèces ; le g. *Paryphanta*, qui en renferme 5 ; le g. *Schizoglossa*, qui en compte 1 seulement, et le g. *Rhenea*, qui en compte 2.

Le genre *Tornatellina* est représenté par une seule espèce (T. *Novoseelandica*, Pfeiffer).

Parmi les Mollusques pulmonés terrestres operculés, les genres *Diplommatina*, *Lagochilus*, *Omphalotropis*, *Realia* et *Hydrocena* sont seuls représentés et comptent un certain nombre d'espèces : il n'existe point d'*Helicina*.

La liste synonymique des Mollusques terrestres et fluviatiles de la Nouvelle-Zélande, que M. Suter publie à la suite de notre note préliminaire, comprend 177 espèces : 157 d'entre elles sont terrestres (140 pulmonés terrestres non operculés et 17 operculés) ; 20 sont fluviatiles (15 Gastropodes et 5 Pélécypodes).

Si l'on compare ce nouveau catalogue au « *Reference List of the Land and Fresh-Water Mollusca New-Zealand,* » publié en 1892 par MM. Hedley et Suter, on trouvera des différences assez notables entre eux. Un certain nombre d'espèces terrestres Néo-Zélandaises a été communiqué à M. Edgard A. Smith, du British Museum, pour qu'il les comparât avec les types de Pfeiffer : cet examen comparatif a eu pour conséquence des changements dans la synonymie. De plus, on est arrivé récemment, en Angleterre, à connaître, d'une façon exacte, les dates de publications réelles de quelques années des *Proceedings* de la Société Zoologique de Londres (1849 à 1856), dates au sujet desquelles subsistaient des doutes qui laissaient incertaine la question de savoir si, pour quelques espèces de la Nouvelle-Zélande, l'antériorité appartenait à Gray, à Pfeiffer ou à Reeve : il en est résulté également des modifications apportées dans la synonymie de quelques noms spécifiques (1).

M. Suter, pour la classification des Mollusques à coquille héliciforme, a adopté, en partie, l'ordre suivi par M. Pilsbry, dans son *Manual of Conchology*. Pourtant, il a cru devoir séparer le genre *Flammulina* du groupe des *Endodonta*, dont il a fait également un genre. Il a fait du genre *Carthœa* de Hutton un simple sous-genre du groupe générique des *Flammulina* : l'animal des *Carthœa*, qu'il a eu occasion d'examiner récemment, possède tous les caractères des *Flammulina* : un pore muqueux caudal bien distinct, une ligne pédale et des organes génitaux haplogones ; les caractères de la mâchoire et ceux de la coquille

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(1) Quant aux noms spécifiques de Pfeiffer empruntés à l'alphabet grec, il est maintenant constaté que les diagnoses de l'auteur allemand contenues dans le volume des *Proceedings of the Zoological Society of London*, qui porte la date de 1852, n'ont été publiées effectivement qu'en 1854, et que, par conséquent, les noms spécifiques du *Conchologia Iconica* de Reeve, publiés en 1852, ont l'antériorité (H. SUTER, *in litteris*).

sont tout à fait semblables à ceux des *Phasis* (= *Pella*) de l'Afrique méridionale. M. Suter a cru devoir réduire à une seule espèce le nombre des *Melanopsis*, à une seule espèce également celui des *Latia*, à trois celui des *Unio*, et à une espèce celui des *Pisidium*. Il pense, d'après la description et la figure, que le *Physa Tenisoni* de Clessin est un *Limnœa* et il ne croit pas que l'*Ancylus Dohrnianus* du même auteur provienne réellement de la Nouvelle-Zélande.

Au point de vue de la distribution géographique des espèces et de leurs affinités, que représente la faune malacologique terrestre et fluviatile de la Nouvelle-Zélande et de quelles faunes insulaires, plus ou moins lointaines (car il n'en existe guère de voisines), convient-il de la rapprocher ?

Quelques naturalistes lui ont trouvé de grands rapports avec la faune du Nord de l'Australie, mais cette opinion reposait en grande partie sur la croyance erronée à la présence, en Nouvelle-Zélande, d'un certain nombre d'espèces Australiennes (*Paryphanta Millegani*, Pfeiffer ; *Hadra reinga*, Gray ; *Cristigibba Taranaki*, Gray ; *Rhytida rapida*, Pfeiffer), et, par contre, à l'existence, en Australie, de quelques formes Néo-Zélandaises (*Carthœa Kivi*, Gray ; *Flammulina (Therasia) Ophelia*, Pfeiffer ; *F. (Thalassohelix) ziczac*, Gould ; *Endodonta (Charopa) coma*, Gray). Une fois ces erreurs d'habitat démontrées, il n'a plus subsisté, entre les deux faunes, que d'assez faibles rapports, bornés à la présence, dans les deux contrées, de représentants des genres *Athoracophorus, Paryphanta, Rhytida, Diplommatina, Tornatellina, Amphipeplea, Unio, Pisidium* et *Sphærium*. Les faunes malacologiques Australienne et Néo-Zélandaise sont, d'ailleurs, à première vue, fort différentes l'une de l'autre et elles présentent souvent des caractères opposés. Ainsi les Bulimes Australiens sont petits et minces, tandis que les Hélices atteignent souvent des dimensions considérables. En Nouvelle-Zélande, c'est tout le contraire : les espèces héliciformes, sauf une, sont presque microscopiques, tandis que les Bulimes *(Placostylus)* sont grands et épais.

Entre la Tasmanie et la Nouvelle-Zélande, les affinités malacologiques sont un peu plus considérables. En effet, nous trouvons un certain nombre de genres représenté dans les deux pays *(Rhytida, Rhenea, Charopa, Gundlachia, Sphærium, Pisidium)*, mais les *Placostylus* manquent en Tasmanie et, considérées dans leur ensemble, les deux faunes sont bien distinctes.

En réalité, les Mollusques terrestres et fluviatiles de la Nouvelle-Zélande, et nous comprenons sous cette dénomination, non seulement les deux grandes îles du Nord et du Sud, mais encore les îles Stewart, Auckland, Campbell et Kermadec, forment un ensemble d'espèces très particulières, toutes, ou à peu près toutes, indigènes, et constituant une faune locale, insulaire et parfaitement caractérisée.

Pourtant, à notre avis, il existe un archipel, dans la faune duquel, si originale qu'elle soit, on trouve des affinités marquées et des rapports incontestables avec celle de la Nouvelle-Zélande : c'est la Nouvelle-Calédonie.

Dès 1880 (1), nous avons dit, à ce propos : « Un fait « curieux à signaler, c'est que la faune malacologique « terrestre et fluviatile de la Nouvelle-Zélande se rapproche « beaucoup plus de celle de la Nouvelle-Calédonie, « malgré la distance considérable qui sépare ces deux « groupes d'îles, que de celle de l'Australie. Dans les « deux archipels le groupe des *Placostylus* est très déve« loppé et présente un contraste frappant avec la taille et le « peu d'épaisseur des Hélices, généralement petites et

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(1) *Journal de Conchyliologie*, vol. XXVIII, p. 367, 1880.

« minces ; le genre *Melanopsis* leur est commun, ainsi que « le genre *Diplommatina.* »

Nous ajouterons qu'il existe, dans les deux archipels, des représentants des genres *Athoracophorus* et *Tornatellina*, ainsi que de la famille des *Rhytididæ*, mollusques carnivores, à coquilles héliciformes et à radule de Testacelle, et que, selon toute apparence, lorsque l'on aura plus étudié et que l'on connaîtra mieux l'organisation intime des Hélices Néo-Calédoniennes de petite taille, il est à prévoir que l'on découvrira encore d'autres affinités entre les formes terrestres de la Nouvelle-Zélande et celles de la Nouvelle-Calédonie, et que, à défaut d'espèces identiques, qu'il n'y a pas lieu d'espérer, on rencontrera un certain nombre de formes représentatives ou équivalentes, qui accentueront encore davantage les rapports des deux faunes l'une avec l'autre.

Dans un mémoire récent sur la distribution géographique des *Placostylus* (1), M. C. Hedley nous apprend que ce genre s'étend depuis l'île Faro de l'archipel Salomon, au nord (*Var. Founaki* du *P. Stutchburyi*) jusqu'à Whangarai, dans l'île du Nord de la Nouvelle-Zélande, au sud (*P. bovinus*), et de Lanthala, dans l'archipel Viti, à l'Est (*P. morosus*), jusqu'à l'île du Lord Howe, à l'Ouest (*P. bivaricosus*), et que son aire de distribution correspond à peu près exactement, en longueur, au grand arc d'activité volcanique, dont on constate l'existence dans le S.-O. de l'Océan Pacifique, de la Nouvelle-Zélande aux îles Salomon, en passant par les Nouvelles-Hébrides, et, en largeur, à la ligne qui réunirait ensemble l'île du Lord Howe, la Nouvelle-Calédonie, les îles Loyalty et l'Archipel Viti. Il ajoute que cet espace de mer recouvre un plateau qui n'est pas immergé à plus de 1300 brasses de profondeur et qu'il appelle *plateau Mélanésien* : dans cette supposition, les îles encore subsistantes constitueraient les restes d'un vaste continent, moins large mais plus long que l'Australie, et qui se serait affaissé, à une époque géologique plus ou moins ancienne. Cette hypothèse, à laquelle le fait remarquable de l'orientation dans le même sens de presque toutes les terres à *Placostylus* (île du Nord de la Nouvelle-Zélande, la seule des deux qui possède le genre ; Nouvelle-Calédonie ; Loyalty ; Nouvelles-Hébrides ; Archipel Salomon) donne un certain degré de probabilité, expliquerait parfaitement la distribution géographique actuelle des *Placostylus* et les affinités, difficiles à contester, qui semblent relier l'une à l'autre les faunes malacologiques terrestres et fluviatiles de la Nouvelle-Calédonie et de la Nouvelle-Zélande. H. C.

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(1) *Proc. Linnean Soc. N. S. Wales,* Sér. 2, vol. VII, p. 335, 1892.

APPENDICE

Nous croyons utile de donner ici, d'après MM. Hedley et Suter, la liste des Mollusques terrestres et fluviatiles qui ont été attribués, à tort, à la Nouvelle-Zélande ou qui y ont été introduits accidentellement.

1. Mollusques terrestres et fluviatiles considérés à tort comme appartenant à la Faune de la Nouvelle-Zélande.

Helix coniformis, Férussac ; *H. cornugiganteum*, Chemnitz ; *H. Diemenensis*, Cox ; *H. Falconari*, Reeve ; *H. Grayi*, Pfeiffer ; *H. guttula*, Pfeiffer ; *H. hystrix*, Mighels ; *H. Incei*, Pfeiffer ; *H. inversicolor*, Férussac (= *Trochomorpha Hermia*, Hutton) ; *H. Nouleti*, Le Guillou ; *H. omicron*, Pfeiffer ; *H. pachystyla*, Pfeiffer ; *H. rapida*, Pfeiffer ; *H. reinga*, Gray ; *H. rubricata*, Gould ; *H. subrugata*, Pfeiffer ; *H. sultana*, Morelet ; *H. Taranaki*, Gray ; *H. tiara*,

Mighels; *H. (Corasia) tricolor*, Pfeiffer; *Helix vitrea*, Férussac.

Cochlostyla Daphnis, Broderip; *C. fulgetrum*, Broderip (= *Bulimus antipodarum*, Gray).

Placostylus miltochilus, Reeve.

Limnæa Wilsoni, Tryon.

Ancylus Dohrnianus, Clessin.

Bulinus pyramidatus, Sowerby; *B. gibbosus*, Gould; *B. Cumingi*, H. Adams.

Cyclotus Macgillivrayi, Pfeiffer (= *C. Charmian*, Hutton).

Melanopsis Wagneri, Roth.

Neritina Zelandica, Récluz; *N. fluviatilis*, Linné.

Batissa violacea, Lamarck.

II. Mollusques terrestres et fluviatiles introduits dans la Nouvelle-Zélande.

Testacella Maugei, Férussac (= *T. vagans*, Hutton).

Paryphanta Millegani, Pfeiffer.

Limax agrestis, Linné (= *L. molestus*, Hutton); *L. maximus*, Linné; *L. flavus*, Linné.

Amalia antipoda, Pfeiffer; *A. emarginata*, Hutton; *A. fuliginosa*, Gould; *A. gagates*, Draparnaud.

Hyalinia cellaria, Müller; *H. alliaria*, Miller; *H. crystallina*, Müller.

Arion ater, Linné; *A. subfuscus*, Draparnaud (= *A. incommodus*, Hutton); *A. hortensis*, Férussac.

Vallonia ~~*pulchella*, Müller~~r. excentrica, Sterki

Helix caperata, Montagu; *H. hortensis*, Müller; *H. aspersa*, Linné.

Cionella lubrica, Müller.

Limnæa stagnalis, Linné; *L. auricularia*, Linné.

LISTE SYNONYMIQUE et BIBLIOGRAPHIQUE
des
MOLLUSQUES TERRESTRES & FLUVIATILES
de la Nouvelle-Zélande

PAR Henri SUTER

Classe GASTROPODA.
Sous-classe ANISOPLEURA.
Ordre AZYGOBRANCHIA.
Sous-ordre HOLOCHLAMYDA.

Fam. MELANIIDÆ.

Genre I. — MELANOPSIS, Férussac père, 1807.

J. J. Férussac, *Essai d'une méthode conchyliologique*, p. 70.

1. *M. trifasciata*, Gray, 1843.

Syn. (1) — *Zelandica*, Gould, 1843. — *Strangei*, Reeve, 1860. — *ovata*, Dunker, 1862.

Illustr. — Reeve, *Conch. Icon.*, vol. XII, *Melanopsis*, pl. I, fig. 2. a, b; 3. a, b. — *U. S. Expl. Exped.*, vol. XII, fig. 146 a, b. — *Voy. Erebus et Terror*, vol. II, *Moll.*, pl. I, fig. 18-22. — *Conch. Cab.* (2), vol. I, pl. XLIX, fig. 20-22.

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(1) Voici la signification de quelques abréviations, employées dans le cours du présent Mémoire. *Syn.* = Synonymie. — *Illustr.* = Illustration. — *Descript.* = Description. — *Anat.* = Anatomie. — *Hab.* = Habitat.

Descript. — Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 263. — *Proc. Bost. N. H. Soc.*, vol. II, p. 225. — Gould, *Otia Conch.*, p. 47. — *Exped. Shells*, vol. IX, p. 47. — *U. S. Expl. Exped.*, vol. XII, p. 130. — *Malak. Blätter*, vol. VIII, p. 150. — Reeve, *Conch. Icon.*, vol. XII, *Melanopsis*, sp. 2, 3. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 78. — *Conch. Cab.* (2), vol. I, part. 24, p. 464.

Anat. — *Trans. N. Zeal. Inst.*, vol. XV, p. 123, pl. XIV, fig. F (radule).

Hab. — Ile du Nord : Waitanga Falls (Dieffenbach); Auckland; Kaneranga, River Thames; Whangarei. — Ile du Sud : Greymouth; Dunedin; Kenepuru Sund.

Fam. HYDROBIIDÆ.

Genre II. — POTAMOPYRGUS, Stimpson, 1865.

Stimpson, *Am. Journ. Conchol.*, vol. I, p. 53.

2. *P. corolla*, Gould. sp. 1848.

Syn. — *badia*. Gould, 1851. — *Fischeri*, Dunker, 1862. — *Reevei*, Frauenfeld, 1862.

Illustr. — *U. S. Expl. Exped.*, vol. XII, fig. 149, a, b.; — *Abhandl. Zoolog. Bot. Gesellsch. Wien*, vol. XV, pl. VIII. — *Proc. Linn. Soc. N. S. W.* (1), vol. III, pl. XIII, fig. 2, 3, 5. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. I, fig. B, 1, 2.

Descript. — Gould, *Proc. Bost. N. H. Soc.*, vol. II, p. 223, vol. III, p. 74. — Gould, *Otia Conch.*, p. 44, 51, 209. — *U. S. Expl. Exped.*, vol. XII, p. 126, 129. — *Malak. Blätter*, vol. VIII, p. 152. — *Abhandl. Zoolog. Bot. Gesellsc. Wien*, vol. XIII, p. 1024; vol. XV, p. 526. — *Proc. Linn. Soc. N. S. W.* (1), vol. III, p. 136. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 82-83. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 145.

Anat. — *Smithsonian Miscell. Coll.* vol. VII, page 49

(radule). — *Amer. Journ. Conch.*, vol. I, p. 54 (radule). — *Trans. N. Zeal. Inst.*, vol. XIV, p. 145, pl. I, fig. F (radule).

Hab. — Iles du Nord et du Sud. Péninsule de Banks (Pickering).

3. *P. Antipodum*, Gray, sp. 1843, (*em. antipodanum*).

Syn. — *Zelandiæ*, Gray, 1843. — *egena*, Gould, 1851. — *gracilis*, Gould, 1852. — *spelæa*, Frauenfeld, 1862.

Illustr. — *U. S. Expl. Exped.*, vol. XII, fig. 151, a, b. — *Abhandl. Zoolog. Bot. Gesellsch. Wien*, vol. XV, pl. VIII. — *Voy. Erebus et Terror*, vol. II. Moll., pl. I, fig. 19. — Trans. N. Zeal. Inst., vol. XIV, pl. I, fig. C, 1.

Descript. — Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 241. — *Rev. Zool.*, vol. VII, p. 356. — *Proc. Boston N. H. Soc.*, vol. III, p. 75. — *U. S. Expl. Exped.*, vol. XII, p. 127. — *Abhandl. Zoolog. Bot. Gesellsch. Wien*, vol. XIII, p. 1022; vol. XV, p. 526. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 81, 82. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 145.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 145, pl. I, fig. G (radule).

Hab. — Iles du Nord et du Sud.

4. *P. Cumingiana*, Fischer, sp. 1860.

Syn. — *Salleana*, Fischer, 1860. — *Crossei*, Frauenfeld, 1864.

Illust. — *Journ. de Conchyl.*, vol. VIII, pl. IV, fig. 6, 7. — Reeve, *Conch. Icon.*, vol. XII, *Melania*, pl. XLIX, fig. 366. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. I, fig. A, 1.

Descript. — Fischer, *Journal de Conchyl.*, vol. VIII, p. 208. — *Malak. Blätt.*, vol. VIII, p. 151. — Reeve, *Conch. Icon.*, vol. XII, sp. 366. — *Abhandl. Zoolog. Bot. Gesellsch. Wien*, vol. XIV, p. 595. — Hutton, *Man. N. Zeal. Moll.*, 1883, p. 83. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 144.

Anat. — Trans. N. Zeal. Inst, vol. XIV, page 144, pl. I, fig. E. (radule).

Hab. — Ile du Nord : Lac Takapuna ; Auckland ; Thames ; Forty Mile Bush ; Waipua River ; Ruamahanga River ; Whangarei ; Hillyers Creek ; Onehunga Springs ; Ile Kowau ; Monts Hunua ; Waikato ; Lac Pupake. — Ile du Sud : Lac Te Anau.

5. *P. pupoides*, Hutton, 1882.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. I, fig. D.

Descript. — Hutton, *op. cit.*, p. 146.

Anat. — Hutton, *op. cit.*, p. 146, pl. I, fig. H (radule).

Hab. — Ile du Nord et île du Sud, seulement dans l'eau saumâtre. Avon (Hutton).

Sous-Ordre PNEUMONOCHLAMYDA.

Fam. CYCLOPHORIDÆ.

Genre III. — DIPLOMMATINA, Benson, 1849.

Benson, *Ann. Mag. Nat. Hist.* (2), vol. IV, p. 193.

6. *D. chordata*, *Pfeiffer*, $18\overset{5}{\cancel{8}}5$.

Descript. — Pfeiffer, *P. Z. S.*, 1855, p. 105. — Pfeiffer, *Mon. Pneum. viv.*, vol. II, p. 12. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 22. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 38. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 210.

Hab. — Nouvelle-Zélande (Strange *fide* Cuming).

Sous-Genre PAXILLUS, H. et A. Adams, 1851.

H. et A. Adams, *Ann. Mag. Nat. Hist.* (2), vol. VII, p. 63.

7. *D. peregrina*, Gould, 2 p., 1848.

Illustr. — *U. S. Expl. Exped.*, vol. XII, fig. 105, a, b.

Descript. — Gould, *Proc. Bost. Soc. N. H.*, vol. II, p. 198. — *U. S. Expl. Exped.*, vol. XII, p. 91. — *Exped. Shells*, vol. IX, p. 34. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 583-~~586~~. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 22. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 38. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 210.

Hab. — Nouvelle-Zélande (*U. S. Expl. Exped.*,

Genre IV. — LAGOCHILUS, Blanford, 1864, *em. (Lagocheilus)*. Blanford, *Ann. Mag. Nat. Hist.* (3), vol. XIII, p. 452.

8. *L. Cytora,* Gray, sp., 1850.

Descript. — Gray, *P. Z. S.*, 1849, p. 167. — *Brit. Mus. Cat. Phaneropneumona*, p. 60. — *Ann. Mag. N. H.* (2), vol. VII, p. 68. — Pfeiffer, *Mon. Pneum. viv.* vol. I, p. 86. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 23. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 37. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 210.

Hab. — Ile du Nord : Auckland (Greenwood); Howick ; Ohaupo ; Mont Pirongia et Chaîne des Monts Hunua.

9. *L. lignarius,* Pfeiffer, sp., 1857.

Illustr. — Reeve, *Conch. Icon.*, vol. XIII, *Cyclophorus*, pl. XIX, fig. 94.

Descript. — Pfeiffer. *P. Z. S.*, 1857, p. 112. — Pfeiffer, *Mon. Pneum. viv.*, vol. II, p. 44. — Reeve, *Conch. Icon.*, vol. XIII, *Cyclophorus*, sp. 94. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 23. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 37. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 210.

Hab. — Ile du Nord : Wellington ; Forty Mile Bush. — Ile du Sud : Wairoa Gorge ; Nelson.

10. *L. pannosus,* Hutton, sp, 1883.

Descript. — *a.* coquille, Hutton, *Trans. N. Zeal Inst.*, vol. XV, p. 140 ; vol. XVI, p. 209.

b. animal, *op. cit.*, vol. XV, p. 140 ; vol. XVI, p. 209.

Anat. — *Op. cit.*, vol. XVI, p. 173, pl. X, fig. U (radule).

Hab. — Ile du Sud : Greymouth (Helms).

11. *L. calvus*, Hutton, sp., 1883.

Descript. — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 140; vol. XVI, p. 209.

Anat. — *Op. cit.*, vol. XVI, p. 174 (dentition).

Hab. — Ile du Sud : Greymouth (Helms).

12. *L. pallidus*, Hutton, sp., 1883.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 477. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 184, 210.

Hab. — Ile du Nord : Auckland (Cheeseman); Mont Pirongia.

13. *L. Hedleyi*, Suter, 189~~3~~.4

Illustr. — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2). Pl. 22 fig. 1-1.d

Descript. — Suter, *op. cit.* p. 484.

Hab. — Ile du Nord : Auckland (Musson); Chaîne des Monts Hunua.

14. *L. torquillum*, Suter, 189~~3~~.4

Illustr. — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2). Pl. 22. fig. 2-2.

Descript. — Suter, *op. cit.* p. 485.

Hab. — Ile du Nord : Horwick ; Chaîne des Monts Hunua (Broun).

15. *L. fasciatus*, Suter, 189~~3~~.4

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXVI. Pl. 19. fig. 30.31.

Descript. — Suter, *op. cit.* p. 132.

Hab. — Ile du Nord.

Fam. CYCLOSTOMATIDÆ.

Genre V. — OMPHALOTROPIS, Pfeiffer, 18~~92.~~54

Pfeiffer, *P. Z. S.* 1852, p. 151.

16. *O. vestita*, Pfeiffer, 1855.

Descript. — Pfeiffer, *P. Z. S.* 1855, p, 106. — Pfeiffer, *Mon. Pneum. viv.*, vol. II, p. 166. — Hector, *Cat. Land*

Moll. N. Zeal., 1873, p. 25. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 40. — *Trans. N. Zeal. Inst.*, vol. XVI, 211.

Hab. — Nouvelle Zélande (*ex coll. Cumingiana*).

Genre VI. — REALIA, Gray, 1850.

Gray, *P. Z. S.* 1849, p. 167 (1850 date réelle).

17. *R. egea*, Gray, 1850 (Pl. IX, fig. 1, 1^a, 1^b).

Illustr. — *Conch. Cab.* (2), vol. I, pl. XL, fig. 17-18. — Chenu, *Màn. de Conch.*, vol. I, fig. 3663.

Descript. — Gray, *P. Z. S.* 1849, p. 167 (1850). — *Ann. Mag. N. H.* (2), vol. VII, p. 67. — Pfeiffer, *P. Z. S.* 1854, p. 304. — *Brit. Mus. Cat. Phaneropneumona*, p. 217. — Pfeiffer, *Mon. Pneum. viv.*, vol. I, p. 305. — *Conch. Cab.* (2), vol. I, part. 19, p. 303.— Hector, *Cat. Land. Moll. N.Zeal.*, 1873, p. 24. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 39. — *Trans. N.Zeal. Inst.*, vol. XVI, p. 211.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 301, pl. XXIII. fig. 57 (radule).

Hab. — Ile du Nord : Auckland (Greenwood); Wanganui ; Forty Mile Bush ; Chaîne des Monts Hunua.

Var. β, *albina*, Suter, 1892.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIV, p. 275.

Hab. — Ile du Nord : Forty Mile Bush.

18. *R. turriculata*. Pfeiffer, 1855.

Descript. — Pfeiffer, *P. Z. S.*, 1854, p.304 (date réelle de publication, 1855). — *Mon. Pneum. viv.*, vol. II, p. 153. — Hector, *Cat. Land. Moll. N. Zeal.*, 1873, p. 24. — Hutton, *Man. N. Zeal, Moll.*, 1880, p. 39. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 211.

Anat. — *Trans. N. Zeal. Inst.*, vol XVI, p. 174, pl. XI, fig. H (radule).

Hab. — Ile du Nord : Kakepuku (Hochstetter); Papakura; Whangarei.

19. *R. carinella*, Pfeiffer, 1862.

Descript. — Pfeiffer, *Malak. Blätter,* vol. VIII, p. 150. — Pfeiffer, *Mon. Pneum. viv.*, vol. III, p. 170. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 24. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 39. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 211.

Hab. — Ile du Nord : Drury; Taupiri (Hochstetter); Auckland; Ohaupo; Chaîne des monts Hunua.

20. *R. Hochstetteri*, Pfeiffer, 1862.

Descript. — Pfeiffer, *Malak. Blätter,* vol. VIII, p. 149. — Pfeiffer, *Mon. Pneum. viv.*, vol. III, p. 170. — Hector, *Cat. Land. Moll. N. Zeal.*, 1873, p. 23. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 39. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 211.

Hab. — Ile du Nord : Baie des Iles (Hochstetter); Auckland; Whangarei.

Fam. HYDROCENIDÆ

Genre VII. — HYDROCENA (Parreyss, ms.), Pfeiffer, 1847.

Pfeiffer, *Zeitschr. für Malak.*, 1847, p. 112.

21. *H. Purchasi*, Pfeiffer, 1862.

Descript. — Pfeiffer, *Malak. Blätter,* vol. VIII, p. 150. — Pfeiffer, *Mon. Pneum. viv.*, vol. III, p. 172. — Hector, *Cat. Land Moll. Zeal.*, 1873, p. 25. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 40.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 301, pl. XXIII, fig. 58 (radule).

Hab. — Ile du Nord : Baie des Iles (Purchas); Whangarei; Auckland; Ohaupo; Forty Mile Bush; Chaîne des Monts Hunua; Mont Pirongia. — Ile du Sud : Greymouth; Wairoa Gorge; Riccarton Bush.

22. *H. Antipodum*, Filhol, sp., 1885.

Descript. — Filhol. *Rech. zool., bot. et géolog., à l'île de Campbell et en Nouvelle-Zélande*, 1885, p. 523.

Hab. — Ile Campbell.

Branche EUTHYNEURA
Ordre PULMONATA
Sous-Ordre BASOMMATOPHORA
Fam. LATIIDÆ
Genre VIII. — LATIA, Gray, 1850.

Gray, *P. Z. S.*, 1849, p. 168 (date réelle, 1850), (= *Pelex*, Gould, 185~~3~~2, *Am. Expl. Exped.*., vol. XII, p. 153.

23. *L. neritoides*, Gray, 1850.

Illustr. — *Zeitschr. f. Malak.* 1852, pl. I, fig. 17-18. — *Journ. de Conchyl.*, vol. II, pl. VI, fig. 16-17. Vol. V, pl. III, fig. 11. — Reeve, *Conch. Icon.*, vol. IX, *Navicella*, pl. VIII, fig. 34 a-b. — *Conch. Cab.* (2), vol. I, Part. 4, pl. II, fig. 10-14. — Adams, *Genera of Rec. Moll.*, pl. LXXXIV, fig. 7. — Chenu, *Man. de Conch.*, vol. I, fig. 3573. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. IV, fig. II.

Descript. — a. *coquille*. Gray, *P. Z. S.* 1849, p. 168. — *Ann. Mag. N. H.* (2), vol. VII. p. 68. — *Journ. de Conchyl.*, vol. II, p. 205. — Reeve, *Conch. Icon.*, *Latia*, sp. 1. — *Zeitschr. f. Malak.*, 1852, p. 182. — H. et A. Adams, *Genera of Rec. Moll.*, vol. II, p. 267. — *Conch. Cab.* (2), vol. I, Part. 4, p. 9. — Hutton, *Man. N. Zeal Moll.*, 1880, p. 29.

b. *animal*. — *P. Z. S.*, 1849, p. 168. — *Trans. N. Zeal. Inst.* vol. XIV, p. 156.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 156, pl. IV, fig. E. P. (radule).

Hab. — Ile du Nord: Auckland (Greenwood); Whangarei.

Var. β. *lateralis*, Gould, 1852.

Illustr. — *U. S. Expl. Exped.* vol. XII, fig. 176 a.-d. —

Reeve, *Conch. Icon.* vol. IX, *Navicella*, pl. VIII, fig. 35 *a-b*. — *Conch. Cab.* (2), vol. I, Part. 6, pl. V, fig. 6.

Descript. — Gould, *U. S. Expl. Exped.*, vol. XII, p. 153. — Gould, *Otia Conch.*, p. 224. — Reeve, *Conch. Icon.*, *Latia*, sp. 2. — *Conch. Cab.* (2), vol. I, Part. 6, p. 9. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 29.

Hab. — Ile du Nord : Wangara et Waitangi (Amer. Explor. Exped.) ; Kaiwarra River ; près Wellington ; H Tillyers Creek ; près Auckland ; Horokiwi.

Var. γ. Petitiana, Fischer, 1856.

Illustr. — *Journ. de Conch.*, vol. V, pl. III, fig. 10.

Descript. — Fischer, *op. cit.*, p. 84.

Hab. — Ile du Nord.

Var. δ. Gassiesiana, Fischer, 1856.

Illustr. — *Journ. de Conchyl.*, vol. V, pl. VII, fig. 1-2.

Descript. — Fischer, *op. cit.*, vol. V, p. 167.

Hab. — Ile du Nord.

Fam. LIMNÆIDÆ.

Genre IX. — GUNDLACHIA, Pfeiffer, 1847.

Pfeiffer, *Zeits. für Malak.*, vol. VI, p. 98, 1849.

24. *G. sp...?*

Syn. — *Ancylus Woodsi*, Johnston (*juv.*).

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXVI. Pl. 14 fig. 1-3.

Descript. — Johnston, *Proc. Roy. Soc. Tasmania*, 1878, p. 25. Trans. N.Z. Inst. vol. 26. p. 122.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXVI (dentition). Pl. 14 fig. 4

Hab. — Ile du Sud : River Avon (Suter).

Note. — Il est possible que cette coquille soit une espèce introduite de la Tasmanie, où le genre *Gundlachia* est représenté (*G. Petterdi*).

Genre X. — LIMNÆA, Lamarck, 1792.

Lamarck, *Prodrome d'une nouvelle classification des Coquilles*, 1792.

25. *L. tomentosa*, Pfeiffer, sp. 1855.

Illustr. — Reeve, *Conch. Icon.*, vol. XVIII, *Succinea*, pl. XII, fig. 81, *a*, *b*.

Descript. — Pfeiffer, *P. Z. S.*, 1854, p. 297. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 814. — Reeve, *Conch. Icon.*, vol. XVIII, *Succinea*, sp. 81. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 13.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVII, p. 55, pl. XII, fig. 9 (radule).

Hab. — Ile du Nord : Auckland (Coll. Cuming ; Gillies)

26. *L. leptosoma*, Hutton, 1885.

Illustr. — *Trans. N.Zeal. Inst.*, vol. XVII, pl. XII, fig. 3.

Descript. — Hutton, *op. cit.*, p. 55.

Hab. — Ile du Nord : Wellington (Hutton).

27. *L. tenella*, Hutton, 1885.

Illustr. — *Trans. N.Zeal. Inst.*, vol. XVII, pl. XII, fig. 4.

Descript. — *a coquille*. Hutton, *op. cit.*, p. 55.
b animal. Hutton, *op. cit.*, p. 56.

Anat. — Hutton, *op. cit.*, p. 56, pl. XII, fig. 11.

Hab. — Ile du Sud : River Heathcote, près Christchurch (Hutton).

28. *L. pusilla, Hutton 1885, em.* (*pucilla*).

Illustr. — *Trans. N. Zeal. Inst.*, vol. XVII, pl. XII, fig, 5.

Descript. — Hutton, *op. cit.*, p. 56.

Hab. — Ile du Nord : Auckland.

29. *L. Tenisoni*, Clessin, sp., 1886, *em. (Tennissoni).*

Illustr. — Clessin, *Conch. Cab.* (2), vol. I, part. 17, pl. LII, fig. 11.

Descript. — Clessin, *op. cit.*, p. 371.
Hab. — Nouvelle-Zélande (teste Morelet).

Var. β. *Alfredi*, Suter, 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XV, fig. 17, *a*.
Descript. — Suter, *op. cit.*, p. 229.
Anat. — Suter, *op. cit.*, p. 300, pl. XXIII, fig. 55, 56 (radule et mâchoire).
Hab. — Ile du Sud.

Genre XI. — AMPHIPEPLEA, Nilsson, 1822.

Nilsson, *Hist. Moll. Suec.*, p. 58.

30. *A. arguta*, Hutton, 1885.

Illustr. — *Trans. N. Zeal. Inst.*, vol., XVII, pl. XII, fig. 1.
Descript. — *a. coquille*, Hutton, *op. cit.* p. 54.
b. animal., Hutton, *op. cit.*, p. 54.
Anat. — Hutton, *op. cit.*, p. 54, pl. XII, fig. 10 (radule).
Hab. — Ile du Nord : Auckland ; Waikato ; Thames. — Ile du Sud : Avon (Hutton).

31. *A. ampulla*, Hutton, 1885.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XVII, pl. XII, fig. 2.
Descript. — Hutton, *op. cit.*, p. 55.
Anat. — Hutton, *op. cit.*, p. 55, pl. XII, fig. 8 (radule).
Hab. — Ile du Nord : Auckland ; Masterton. — Ile du Sud : Arthur's Pass (Brown).

Var. β. *Globosa*, Suter, 1891.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, Pl. XVIII, fig. 12 *a.-c*.
Descript. — Suter, *op. cit.*, p. 93.
Anat. — Suter, *op. cit.*, p. 93 (dentition).

Hab. — Ile du Nord. — Ile du Sud : Tasman Valley (Suter); Ashburton.

Genre XII. — PLANORBIS, Guettard, 1756.

Guettard, *Mém. Acad. Sc. de Paris*, p. 57.

32. *P. Corinna*, Gray, 1850.

Illustr. — Reeve, *Conch. Icon.*, vol. XX, *Planorbis*, pl. XXIV, fig. 122, *a*, *b*. — *Trans. N. Zeal. Inst.*, vol. XVII, pl. XII, fig. 6.

Descript. — *a. coquille.* Gray, *P. Z. S.* 1849, p. 167. — *Ann. Mag. N. H.* (2), vol. VII, p. 67. — Reeve *Conch. Icon.*, vol. XX, *Planorbis*, spec. 122. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 32.

b. animal. Trans. N. Zeal. Inst., vol. XVII, p. 57.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVII, p. 57 (radule).

Hab. — Ile du Nord : Auckland (Greenwood). — Ile du Sud : lac Wakatipu ; Christchurch.

Genre XIII. — BULLINUS, Adanson, 1757, *em. (Bulinus).*

Adanson, *Hist. Nat. des Coq. du Sénégal*, sp. 1757.

33. *B. variabilis*, Gray, sp. 1843.

Syn. — *Guyonensis*, Tenison-Woods, 1879; *Novæ-Zelandiæ*, Sowerby, 1873; *gibbosus*, Hutton, 1882, *non* Gould : *Novæseelandiæ*, Clessin, 1886.

Illustr. — Reeve, *Conch. Icon.*, vol. XIX, *Physa*, pl. IV, fig. 29 *a*, *b*. — *Proc. Linn. Soc. N.S. W.* (1), vol. 3, pl. XIII, fig. 4. — *Trans. N. Zeal. Inst.*, vol. XIV, pl.IV, fig. V; vol. XVII, pl. XII, fig. 7. — *Conch. Cab.* (2), vol. I, part. 17, pl. LIV, fig. 7.

Descript. — *a. coquille.* Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 248. — *Revue Zool.*, vol. VII, p. 105. — Tenison-

Woods, *Proc. Linn. Soc. N. S. W.* (1), vol. III, p. 138. — Sowerby, Reeve, *Conch. Icon.*, vol XIX, *Physa*, sp. 29. — Hutton, *Trans. N. Zeal. Inst.*, vol. XIV, p. 155. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 30. — *Trans. N. Zeal. Inst.*, vol. XVII, p. 56. — Clessin, *Conch. Cab.* (2), vol. I, part. 17, p. 372.

b. animal. Trans. N. Zeal, Inst., vol. XIX, p. 155.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 155, pl. IV, fig. *C. Q. T.* (màchoire, radule).

Hab. — Iles du Nord et du Sud, dans les cours d'eau et les étangs.

34. *B. tabulatus*, Gould, sp., 1848.

Syn. — *mœsta*, H. Adams, 1861; *lirata*, Tenison-Woods. 1879; *Coromandelicus*, Dunker, 1862; *Hochstetteri*, Dunker, 1862.

Illustr. — *U. S. Expl. Exped.*, vol. XII, fig. 136 *a*, *b*. — Reeve, *Conch. Icon.*, vol. XIX, *Physa*, pl. III, fig. 17 *a*, *b*. pl. IV, fig. 32. — *Proc. Linn, Soc. N.S. W.* (1), vol. III, pl. XIII, fig. 6. — *Conch. Cab.* (2), vol. I, part. 17, pl. XLII, fig. 4; pl. XLIII, fig. 4.

Descript. — Gould, *Proc. Boston, Soc. N. H.*, vol. II, p. 214. — *U. S. Expl. Exped.*, vol. XII, p. 116. — Gould, *Otia Conch.*, p. 42. — *P. Z. S.*, 1861, p. 144. — Tenison-Woods, *Proc. Linn. Soc. N. S. W.* (1), vol. III, p. 138. — Reeve, *Conch. Iconica*, vol. XIX, *Physa*, sp. 17. — *Conch. Cab.* (2), vol. I, Part. 17, p. 294-299. — *Malak. Blätter*, vol. IX, p. 150.— Hutton, *Man. N. Zeal. Moll.*, 1880, p. 30-31.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 156, pl. IV, fig. D; vol. XVII, p. 57, pl. XII, fig. 92; *P. Z. S.*, 1889, p. 139-140, fig. 4 (radule).

Hab. — Iles du Nord et du Sud. Baie des Iles, dans une source de montagnes (Drayton).

35. *B. antipodeus*, Sowerby, sp. 1873.

Illustr. — Reeve, *Conch. Icon.*, vol. XIX, *Physa*, pl. V, fig. 37.

Descript. — Sowerby, *in* Reeve, *Conch. Icon.*, vol. XIX, *Physa*, sp. 37. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 30. — *Trans. N.Zeal. Inst.*, vol. XVII, p. 56.

Hab. — Iles du Nord et du Sud, dans les lacs.

Sous-Ordre STYLOMMATOPHORA

A. MESOMMATOPHORA

Fam. ATHORACOPHORIDÆ

Genre XIV. ATHORACOPHORUS, Gould, 1852.

Gould, *U. S. Expl. Exped.*, vol. XII, p. 1.

36. *A. bitentaculatus*, Quoy et Gaimard, sp., 1832.

Syn. — *Antipodarum*, Gray, 1853; *dubius*, Cockerell, 1891.

Illustr. — *Voy. de l'Astrolabe, Zool.* vol. II, pl. XIII, fig. 1-3. — *U. S. Expl. Exp.*, vol. XII, fig. 6, *a-c*; H. et A. Adams, *Genera Moll.*, pl. LXXX, fig. 5. — Tryon, *Struct. and Syst. Conch.*, pl. CI, fig. 51.— Chenu, *Man. Conch.*, vol. I, fig. 3498. — *Trans. Linn. Soc.*, vol. XXII, pl. LXVI, fig. 1-4. — Mrs. Gray, *Fig. Moll.*, vol. IV, pl. CLXXX, fig. 15. — *Zeitschr. f. wissenschaftl. Zool.*, vol. XV, pl. XXIV, fig. 1,2.

Descript. — Quoy et Gaimard, *Voy. Astrolabe, Zool.*, vol. II, p. 148. — *U. S. Expl. Exped.*, vol. XII, p. 2. —Gray, *Ann. Mag. N. H.*, (2) vol. XII, p. 414. — *P. Z. S.* 1853, p. 112. — *Zeitschr. f. wissenschaftl. Zool.*, vol. XV, p. 446. — *Cat. Pulmonata Brit. Mus.*, p. 6. — *Trans. Linn. Soc.*, vol. XXII, p. 381. — Hector, *Cat. Land Moll. N. Zeal.* 1873, p. 1. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 27. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 206. — Cockerell, *P. Z. S.*, 1891, p. 217.

Anat. — *Zeitschr. f. wissenschaftl. Zool.*, p. 446, vol. XV.

pl. XXIV, fig. 3-5. — *Trans. Linn. Soc.*, vol. XXII, pl. LXVI, fig. 6-11. — Semper, *Reise in Arch. Philippinen*, vol. III, pl. XV, fig. 16-17. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. V, fig. 12-16; vol. XVI, p. 173, pl. X, fig. M.

Hab. — Ile du Nord : un cratère près Taiaimi ; Auckland ; Thames ; Forty Mile Bush ; Heretaunga ; Wellington, — Ile du Sud ; Baie de Tasman (Quoy et Gaimard) ; Greymouth ; Boatman's.

Sous-Genre KONOPHORA, Hutton, 1879.

Hutton, *Trans. N. Zeal. Inst.*, vol. XI, p. 332.

37. *A. marmoreus,* Hutton, sp,, 1879.

Syn. — *marmoratus*, E. von Martens, 1889.

Illustr. — *Trans. N. Zeal Inst.*, vol. XIV, pl. V, fig. I. — *Nova Acta, etc.*, vol. LIV, pl. IV, fig. 3.

Descript. — Hutton, *Trans. N. Zeal. Inst.*, vol. XI, p. 332; vol. XIV, p. 158; vol. XVI, p. 206. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 27.—Simroth, *Nova Acta*, etc., vol. LIV, p. 71.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. V, fig. 2-9; vol. XVI, p. 173; pl. X, fig. N ; pl. XI, fig. X. — *Nova Acta*, etc., vol. LIV, p. 71, pl. IV, fig. 5-6-10.

Hab. — Ile du Sud : Dunedin (Bourne) ; Greymouth. — Ile Auckland.

Sous-Genre PSEUDANEITEA, Cockerell, 1891.

T.-D.-A. Cockerell, *P. Z. S.*, 1891, p. 217.

38. *A. papillatus*, Hutton, sp., 1879.

Syn. — *verrucosus*, E. v. Martens, 1889.

Illustr. — *Nova Acta*, etc., vol. LIV, pl. IV, fig. 11, *a.-c.* — *Trans. N. Zeal. Inst.*, vol. XXVI. Pl. 14. fig. 6-9.

Descript. — Hutton, *Trans. N.Zeal. Inst.*, vol XI, p. 332; vol. XIV, p. 159 ; vol. XVI, p. 206. — Hutton, *Man. N.Zeal.*

Moll., 1880, p. 27. — Simroth, *Nova Acta* etc., vol. LIV, p. 77.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. V, fig. 10-11 — *Nova Acta* etc., vol. LIV, pl. IV, fig. 12-14. . vol. 26. Pl. 15 fig. 10. 11.

Hab. — Ile du Sud. — Ile Chatham. — Ile Auckland.

Var. β. *Nigricans*, E. von Martens, 1889.

Descript. — Simroth, *Nova Acta*, etc., vol. LIV, p. 77.

Hab. — Ile du Sud. — Ile Auckland (Krone)

Var. γ. *Fasciata*, E. von Martens, 1889, *em. (fuscata)*.

Descript. — Simroth, *Nova Acta*, etc., vol. LIV, p. 79.

Hab. — Ile du Sud. — Ile Auckland (Krone).

B. Pleurommatophora.

Fam. Helicteridæ.

Genre XV. — Tornatellina, Beck, 1837.

Beck, *Index Molluscorum*, p. 80, 1837.

39. *T. Novoseelandica*, Pfeiffer, sp., 185~~4~~.3

Illustr. — *Conch. Cab.* (2), vol. I, pl. XVIII, fig. 10, 11.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 149, 1854. — Pfeiffer, *Mon. Hel. Viv.*, vol. III, p. 524. — *Conch. Cab.* (2), vol. I, Part. XV, p. 149. — Hector, *Man. Land Moll. N. Zeal.*, 1873, p. 21. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 14. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 191.

Hab. — Ile du Nord : Auckland (Greenwood); Thames; Chaîne des Monts Hunua; Waimarama.

Fam. Bulimulidæ

Genre XVI. Placostylus, Beck, 1837.

Beck, *Index Molluscorum*, p. 57, 1837.

40. *P. bovinus*, Bruguière, sp. 1792.

Syn. — *Shongii*, Lesson, 1830.

Illust. — *Voy. de la Coquille, Zool*, vol. I, pl. VII, fig. 4, 5. —Perry, *Conchology*, 1811, pl. XXIX, fig. 12. — *U. S. Expl. Exped.*, vol. 12, fig. 85, *a*, *b*. (*animal*). — Reeve, *Conch. Icon.* vol. V, *Bulimus*, pl. XXIV, fig. 159. — *Conch. Cab.* (2), pl. XVI, fig. 14-15; I. Part. 13, *a.*, pl. IX, fig. 1.

Descript. — Bruguière, *Encyclop. Méthod.*, vol. I, p. 345. — Lesson, *Voy. de la Coquille, Zool.*, vol. I, p. 321. — *Dieffenbach's N. Zeal.*, vol. II, p. 263. — *Journ. de Conchyl.*, vol. IV, p. 403-405; vol. XII, p. 124. — Reeve, *Conch. Icon.* vol. V, *Bulimus*, sp. 159. — Pfeiffer, *Mon. Hel. viv.* vol. II, p. 140. — *U. S. Expl. Exped.*, vol. XII, p. 79. — *Conch. Cab.* (2), vol. I, Part. 13 *a.*, p. 36-37. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 20. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 14. — *Trans. N. Zeal. Inst.* vol. XVI, p. 190.

Anat. — *Trans. N. Zeal.* vol. XIII, p. 200; vol. XIV, p. 152, pl. III, fig. D, O.; vol XVI, pl. IX, fig. B (mâchoire, radule).

Hab. — Ile du Nord : Cap Nord; Cap Maria; Baie des Iles; Wangaroa.

Var. β. *Novoseelandica*, Pfeiffer, 1862.

Descript. — Pfeiffer, *Malak. Blätter*, vol. VIII, p. 149 (*Bulimus Novoseelandicus*). — *Journ. de Conchyl.*, vol. XII, p. 128, 1864. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 20. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 14. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 190.

Hab. — Ile du Nord : Whangaruru; Baie des Iles (Hochstetter); Whangarei.

Var. γ. *Candida.*, Crosse, 1864.

Descript. — Crosse, *Journ. de Conchyl.*, vol. XII, p. 125, 1864, — *Trans.*, *N. Zeal. Inst.*, vol. XVI, p. 190.

Hab. — Ile du Nord : Cap Maria.

Fam. HELICIDÆ.

Groupe HAPLOGONA

Genre XVII. FLAMMULINA, (E. von Martens, 1873) Suter.

Suter, *Proc. Linn. Soc. N. S. W.*, vol. VIII, (2).

Sous-genre I. FLAMMULINA, E. von Martens, 1873 (s. str.)

(= *Amphidoxa,* Hutton, 1883, *non* Albers).

E. von Martens, *Critical List of N. Zeal. Mollusca,* p. 12, 1873.

41. *F. compressivoluta,* Reeve, sp., 1852.

Syn. — *omega,* Pfeiffer, 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. CXXX, fig. 791.— Tryon, *Man. Conch.* (2), vol. I, pl. XXVI, fig. 28.

Descript. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, sp. 791. — Pfeiffer, *P. Z. S.*, 1852, p. 56. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 33. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 4. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 10. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 198. — Tryon, *Man. Conch.* (2), vol. I, p. 128.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 228; pl. XX, fig. 8-9 (mâchoire; radule).

Hab. — Ile du Nord : Hawke's Bay; Wellington ; Forty Mile Bush ; Heretaunga.

42. *F. Zebra,* Le Guillou, sp., 1842.

Syn. — *phlogophora,* Pfeiffer, 1850 ; *flammigera,* Pfeiffer, 185~~4~~3 ; *multilimbata,* Hombron et Jacquinot, 1854.

Illustr. — *Voy. Pôle Sud, Zool.*, pl. VI, fig. 5-8. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. CXXX, fig. 790. — *Conch. Cab.* (2), vol. I, part. 2, pl. CLV, fig. 1-4. — Tryon, *Man. Conch.*, (2), vol. I, pl. XXVI, fig. 10. IX. pl. III. fig. 23.

Descript. — *a. coquille.* — Le Guillou, *Rev. Zoologique,* vol. V, p. 136. — *P. Z. S.*, 1849, p. 127; 1852. p. 147. —

Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 34; vol. IV, p. 14. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, sp. 790. — *Conch. Cab.* (2), vol. I, part. 2, p. 456. — *Voy. Pôle Sud*, vol. V, p. 16. — Hector, *Cat. Land. Moll. N. Zeal.*, 1873, p. 1, 4. — *Cat. Pulm. Brit. Mus.*, p. 70. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 12, 22. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 198. — Tryon, *Man. Conch.* (2), vol. I, p. 128.

b. animal. Trans. N. Zeal. Inst., vol. XVI, p. 170.

Anat. — *Trans. N. Zeal. Inst.*, vol., XVI, p. 171; pl. IX, fig. Z; pl. XI, fig. P. (radule; mâchoire).

Hab. — Ile du Nord : Wellington; Forty Mile Bush; Mont Pirongia. — Ile du Sud : Greymouth ; Oxford ; Presqu'île de Banks; Akaroa; Riccarton Bush et Boatsman's. — Iles Auckland (Le Guillou).

43. *F. Chiron*, Gray, sp., 1850.

Illustr. — Reeve, *Conch. Icon.* vol. VII, pl. CXXXI, fig. 797. — *Trans. N. Zeal. Inst.*, vol. XXIV, Pl. XX, fig. 10, *a*, *b*. — Tryon, *Man. Conch.* (2), vol. I, pl. XXVI, fig. 19.

Descript. — Gray, *P. Z. S.*, 1849, p. 166. — *Ann. Mag. N. H.* (2), vol. VII, p. 66. — Pfeiffer, *Man. Hel. viv.*, vol. III, p. 94. — Reeve, *Conch. Icon.*, vol. VII, sp. 797. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 10. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 23. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 199. — Tryon, *Man. Conch.* (2), vol. I, p. 129.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 171; pl. X, fig. B; vol. XXIV, p. 289, pl. XX, fig. 11, 12 (radule; mâchoire).

Hab. — Ile du Nord : Auckland (Greenwood); Wellington; Forty Mile Bush; Thames; Chaîne des monts Hunua.

44. *F. crebriflammis*, Pfeiffer, sp., 185~~4~~.3

Illust. — *Conch. Cab.* (2), vol. I, part. 2, pl. CLV, fig. 5-8.

— Reeve, *Conch. Icon.*, vol. VII, pl. CXXXI, fig. 805. — Tryon, *Man. Conch.* (2), vol. I, pl. XXVI, fig. 9.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 148. — Pfeiffer, *Man. Hel. viv.*, vol. III, p. 91. — *Conch. Cab.* (2) vol. I, part. 2, p. 456. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 10. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 24. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 199. — Tryon, *Man. Conch.* (2), vol. I, p. 130.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 171; pl. XI, fig. G.

Hab. — Ile du Nord : Waikato ? — Ile du Sud : Greymouth ; Wairoa Gorge ; Nelson ; Riccarton Bush ; Akaroa.

45. *F. corneo-fulva*, Pfeiffer, sp., 1862.

Illustr. — *Novit. Conch.*, vol. III, pl. LXXVIII, fig. 11-13. — *Trans. N. Zeal. Inst.*, vol. XXIV, pl. XX, fig. 5, *a. b.* — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 67-69.

Descript. — Pfeiffer, *Malak. Blätter*, vol. VIII, p. 148. — Pfeiffer, *Mon. Hel. viv.*, vol. V, p. 145. — Hector, *Cat. Land Moll. N. Zeal.* 1873, p. 9. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 12. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 76.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 287, pl. XX, fig. 6-7 (mâchoire, radule).

Hab. — Ile du Nord : Baie des Iles (Hochstetter). — Ile du Sud : Nerger Range ; Canterbury.

46. *F. cornea*. Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 64-66.

Descript. — *a.* coquille. Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 136; vol. XVI, p. 198. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 75.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 171.

Anat. — *Op. cit.*, vol. XVI, p. 171, pl. X, fig. A (radule).

Hab. — Ile du Nord : Auckland (Cheeseman); Thames; Orakei.

47. *F. Jacquenetta*, Hutton, sp. 1883.

Illust. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 70-72.

Descript. — *a.* coquille. — Hutton, *N. Zeal. Journ. Sci.*, vol. 1, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 179, 198. — Pilsbry, *Man. Conch*, (2), vol. VIII, p. 76.

b. animal. — *Trans. N. Zeal. Inst.* vol. XVI, p. 180.

Anat. — *Op. cit.*, vol. XVI, p. 180, pl. X, fig. C. (radule).

Hab. — Ile du Sud : Greymouth (Helms).

48. *F. Perdita,* Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 73-75.

Descript. — *a.* coquille. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 179, 198. — Pilsbry, *Man. Conch.*, (2), vol. VIII, p. 76.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 179.

Anat. — *Op. cit.*, vol. XVI, p. 179, pl. XI, fig. C, A (radule; mâchoire).

Hab. — Ile du Nord : Auckland (Cheeseman); Wanganui; Wellington; Thames; Whangarei; Ohaupo; Chaîne des monts Hunua; mont Pirongia. — Ile du Sud : Greymouth; Wairoa Gorge; Nelson; Akaroa.

Section CALYMNA, Hutton, 1884.

Hutton, *Trans. N. Zeal. Inst.*, vol. XVI, p. 199.

49. *F. costulata*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. IX, pl. III fig. 20-22.

Descript. — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 136; vol. XVI, p. 199. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 73.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 171, pl. X, fig. D (radule).

Hab. — Ile du Nord : Auckland (Cheeseman); Thames; Ohaupo; Hawke's Bay.

50. *F. Lavinia*, Hutton, sp., 1883.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal Inst.*, vol. XVI, p. 180, 199. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 74.

Hab. — Ile du Nord : Palmerston North (T. W. Kirk).

51. *F. Feredayi*, Suter, sp., 1891.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVIII, fig. 10, *a. b.* — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 58-60.

Descript. — *a.* coquille. — Suter. *Trans. N. Zeal. Inst.*, vol. XXIII, p. 91. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 74.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 91.

Anat. — *Op. cit.*, vol. XXIII, p. 91, pl. XVIII, fig. Q. R. (mâchoire; radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter); Chaîne des Monts Hunua.

Var. β. *Glacialis*, Suter, 1891.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIII, p. 92.

Anat. — *Op. cit.*, vol. XXIII, p. 92 (mâchoire ; radule).

Hab. — Ile du Sud : Hooker Valley (Suter).

52. *F. olivacea*, Suter, sp. 1892.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIV, pl. XXI, fig. 13, *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, fig. 61-63.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIV, p. 290. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 75.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 290, pl. XXI, fig. 14-15 (mâchoire ; radule).

Hab. — Ile du Nord : Hillyer's Creek, près Auckland (Musson).

53. *F. Pilsbryi*, Suter, 189~~3~~.4

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXVI. Pl. 19. Fig. 32-32b.

Descript. — Suter, *Op. cit.* p. 133,

Anat. — *Op. cit.* (mâchoire ; radule). p. 133.

Hab. — Ile du Nord. — Ile du Sud.

Sous-Genre II. — GERONTIA, Hutton, 1883.

Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 135.

54. *F. pantherina*, Hutton sp. 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. IX, pl. III, fig. 1-3.

Descript. — *a. coquille.* — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 135 ; vol. XVI, p. 200. — Pilsbry, *Man. Conch.* vol. VIII, p. 65.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XV, p. 135.

Anat. — *Op. cit.*, vol. XVI, p. 166 ; pl. IX, fig. I ; pl. XI, fig. R. (radule ; mâchoire).

Hab. — Ile du Sud : Greymouth (Helms).

55. *F. Cordelia*, Hutton, sp. 1883.

Illust. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 34-36.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 178, 200. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 66.

Hab. — Ile du Nord : Auckland (Cheeseman).

Sous-Genre III. — PHACUSSA, Hutton, 1883.

Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 138.

56. *F. hypopolia*, Pfeiffer, sp., 185~~4~~.3.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. CXXX, fig. 787. — *Conch. Cab.* (2), vol. I, pl. CLXI, fig. 18-20. — Tryon, *Man. Conch.* (2), vol. II, pl. LIV, fig. 15.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 148. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, sp. 787. — *Conch. Cab.* (2), vol. I, part. 2, p. 496. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 68. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 9. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 6. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 205. — Tryon, *Man. Conch.* (2), vol. II, p. 181, 212.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 286, pl. XX, fig. 2-4 (mâchoire ; radule).

Hab. — Ile du Nord : Hawke's Bay ; Wellington. — Ile du Sud : Bealey ; Dunedin ; Hooker Valley ; Boatman's.

57. *F. Helmsi*, Hutton, sp., 1883.

Descript. — *a. coquille.* — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 137 ; vol. XVI, p. 205.

b. animal. — *op. cit.*, vol. XV, p. 138.

Anat. — *Op. cit.*, vol. XVI, p. 172, pl. X, fig. I ; pl. XI, fig. W. (radule ; mâchoire).

Hab. — Ile du Sud : Greymouth (Helms).

Var. β. *Maculata,* Hutton, 1884.

Descript. — Hutton, *Trans. N. Zeal. Inst.*, vol. XVI, p. 205.

Hab. — Ile du Sud : Greymouth (Helms).

58. F. *fulminata,* Hutton, sp. 1883.

Descript. — Hutton, *Trans. N. Zeal. Inst.,* vol. XV, p. 138; vol. XVI, p. 205.

Anat. — *Op. cit.,* vol. XVI, p. 173, pl. X, fig. J. (radule).

Hab. — Ile Stewart (T. Kirk).

Sous-Genre IV. THERASIA, Hutton, 1883.

Hutton, *N. Zeal. Journ. Sc.,* vol. I, p. 477.

59. *F. Celinde,* Gray, sp., 1850.

Illustr. — Reeve, *Conch. Icon.,* vol. VII, pl. CXXXI, fig. 799. — Tryon, *Man. Conch.* (2), vol. II, pl. LXII, fig. 41.

Descript. — Gray, *P. Z. S.,* 1849, p. 164. — *Ann. Mag. N. H.* (2), vol. VII, p. 64. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 125. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, sp., 779. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 16. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 6. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 202. — Tryon, *Man. Conch.* (2), vol. II, p. 211.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 162, pl. IX, fig. 0; pl. XI, fig. U. (radule; mâchoire).

Hab. — Ile du Nord : Auckland (Greenwood); Thames; Whangarei; Ohaupo; Chaîne des Monts Hunua; Mont Pirongia.

60. F. *Ophelia*, Pfeiffer, sp., 1855.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXCI, fig. 1345. — Cox, *Mon. Austral. Land Shells*, pl. IX, fig. 4; pl. XVII, fig. 17. — Tryon, *Man. Conch.* (2), vol. II, pl. LXII, fig. 42.

Descript. — Pfeiffer, P. Z. S., 1854, p. 146. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 29. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, sp. 1345. — Cox, *Mon. Austral. Land Shells*, p. 34. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 6. — Hutton,

Man. N. Zeal. Moll., 1880, p. 18. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 202. — Tryon, *Man. Conch.* (2), vol. II, p, 211.

Hab. — Ile du Nord : Baie des îles ; Auckland. — Ile du Sud : Dunedin ; Dyer's Pass ; Waipara ; Lac Guyon ; Castle Rock ; Southland ; Waitaki ; Hurunui.

61. *F. decidua*, Pfeiffer, sp., 1857.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 52-54.

Descript. — Pfeiffer, *P. Z. S.*, 1857, p. 108. — Pfeiffer. *Mon. Hel. viv.*, vol. IV, p. 71. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 9. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 6. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 203. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 71.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 291, pl. XXI, fig. 16 17 (mâchoire ; radule).

Hab. — Ile du Nord : Auckland ; Thames ; Wangaruru ; Wellington. — Ile du Sud : Hooker Valley ; St-Helens ; Amuri et Wairoa Gorge ; Nelson.

62. *F. Valeria*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 46-48.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 477. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 183, 202. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 69.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 151, pl. III, fig. B (*hypopolia*, par erreur) ; vol, XVI, pl. IX, fig. N. (radule).

Hab. — Ile du Sud : Dunedin (Hutton) ; Akaroa ; Dyer's Pass ; Riccarton Bush.

63. *F. Tamora*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 49-51.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 477. — *Trans. N. Zeal. Inst.*, vol. XVI, 182, 202. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 70.

Hab. — Ile du Nord : Auckland (Cheeseman) ; Thames ; Whangarei ; Ohaupo ; Forty Mile Bush ; Chaîne des monts Hunua ; Mont Pirongia ; Hawke's Bay.

64. *F. Thaisa,* Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. IX, pl. III, fig. 14-16.

Descript. — *a. coquille.* — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 477. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 182, 202. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 70.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 182.

Anat. — *op. cit.*, vol. XVI, p. 182, pl. IX, fig. M. ; pl. XI, fig. T.

Hab. — Ile du Nord : Auckland ; Napier ; Wellington ; Forty Mile Bush ; Whangarei. — Ile du Sud : Southland (Thomson) ; Waipara ; Waitaki ; Queenstown ; Lac Guyon ; Dunedin ; Wairoa Gorge ; Nelson ; Mont Linton ; Castle Rock.

65. *F. Traversi*, E.-A. Smith, sp., 1884.

Illustr. — *P. Z. S.*, 1884, pl. XXIII, fig. 16, *a*, *b*. — Tryon, *Man. Conch.* (2), vol. II, pl. LXIII, fig. 68-70.

Descript. — Smith, *P. Z. S.*, 1884, p. 274. — Tryon, *Man. Conch.* (2), vol. II, p. 214 ; vol. VIII, p. 71.

Anat. — Suter, *Proc. Linn. Soc. N. S. W.*, vol. VIII (2) (mâchoire ; radule).

Hab. — Ile du Nord : Wairarapa (Travers) ; Forty Mile Bush ; Ohaupo ; Mont Pirongia. — Ile du Sud.

Sous-Genre V. — CARTHÆA, Hutton, 1884.

Hutton, *Trans. N. Zeal. Inst.*, vol. XVI, p. 189.

66. *F. Kivi,* Gray, sp., 1843.

Syn. — *Irradiata*, Gould, 1848 ; *radiaria*, Pfeiffer, 1855.

Illustr. — *U. S. Expl. Exped.*, vol. XII, pl. V, fig. 65 *a-c*. — Cox, *Mon. Austral. Land Shells*, pl. XX, fig. 10, *a*, *b*. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXX, fig. 794 ; pl. CLXXXIX, fig. 1322. — *Voy. Erebus et Terror*, vol. II, *Moll.*, pl. I, fig. I. — Tryon, *Manual Conch.* (2), vol. III, pl. XXI, fig. 8-10.

Descript. — Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 262. — *Proc. Boston N. H. S.*, vol. II, p. 178. — *P. Z, S.* 1854, p. 55. — *U. S. Expl. Exp.*, vol. XII, p. 34. — Cox, *Mon. Austral. Land Shells*, p. 35. — Gould, *Otia Conch.*, p. 25. — Reeve, *Conch. Icon.*, *Helix*, sp. 794, 1322. — Pfeiffer, *Mon. Hel. viv.*, vol. I, p. 192. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 17. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 20. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 189. — Tryon, *Man. Conch.* (2). vol. III, p. 37.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 170, pl. IX, fig. A ; pl. XI, fig. I (radule ; mâchoire).

Hab. — Ile du Nord : Auckland ; Hokianga ; Great Omaha ; Titirangi ; Napier ; Wellington ; Thames ; Ohaupo ; Whangarei ; Chaîne des Monts Hunua ; Mont Pirongia ; Taupiri.

Sous-Genre VI. — PYRRHA, Hutton, 1884.

Hutton, *Trans. N. Zeal. Inst.*, vol. XVI, p. 200.

67. *F. Cressida*, Hutton, sp. 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. IX, pl. III, fig. 17-19.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 178,200. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 72.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 178 ; pl. IX, fig. X ; pl. XI, fig. N. (radule ; mâchoire).

Hab. — Ile du Nord : Wellington. — Ile du Sud : Southland (Thomson) ; Preservation Inlet : Haast River ; Greymouth. — Ile Stewart.

68. *F. subincarnata,* Suter, 189~~3~~.4

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXVI. Pl. 19. fig. 33 – 33.b.

Descript. — Suter, *op. cit.* p. 133.

Anat. — *Op. cit.* (mâchoire ; radule). p. 134. Pl. 20. fig. 34 & 35.

Hab. — Ile du Nord.

Sous-Genre VII. — PHENACOHELIX, Suter, 1892.

(*Fruticicola,* Hutton, 1884, *non* Held)

Suter, *Trans. N. Zeal. Inst.*, vol. XXIV, p. 270.

Observ. — M. Ancey soutient que son genre *Rhytidopsis* (1882), établi pour des espèces de la Nouvelle-Calédonie, est identique avec notre section des *Flammulina*, mais il n'est pas à ma connaissance que cette identité ait été prouvée par l'examen de l'armature linguale. Pour cette raison, je ne crois pas devoir adopter, pour les espèces de ce groupe, le nom proposé par M. Ancey, car il n'est pas suffisamment certain qu'il soit bien appliqué. La ressemblance extérieure des coquilles ne suffit pas toujours, à elle seule, pour constituer l'identité générique ou subgénérique.

69. *F. pilula,* Reeve, 1852.

Syn. — *Iota,* Pfeiffer, 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXII, fig. 809. — Tryon, *Man. Conch.* (2), vol. II, pl. LXII, 43.

Descript. — Reeve, *Conch. Icon. Helix*, p. 809. — Pfeiffer, *P. Z. S.*, 1852, p. 57 (Date réelle, 1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 69. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 8. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 6. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 194. — Tryon, *Man. Conch.* (2), vol, II, p. 212.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 161 ; pl. IX, fig. K ; pl. XI, fig. M. (radule ; mâchoire).

Hab. — Ile du Nord : Auckland ; Hawke's Bay ; Wanganui ; Wellington ; Thames ; Forty Mile Bush ; Whangarei;

Ohaupo ; Chaîne des Monts Hunua ; Heretaunga ; Mont Pirongia, Mont Taupiri. — Ile du Sud : West Coast ; Bealey ; Queenstown ; Lac Guyon ; Owaka ; Dyer's Pass ; Eyreton ; Canterbury ; Riccarton Bush.

Var. β. *Unicolor,* Suter, 189~~3~~.4

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXVI. p. 134
Hab. — Ile du Nord.

70. *F. granum*, Pfeiffer, sp., 1857.

Descript.— Pfeiffer, *P. Z. S.*, 1857, p. 107. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 20. — Hector, *Cat. Land. Moll. N. Zeal.*, 1873, p. 5. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 20. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 194. — Tryon, *Man. Conch.* (2), vol. II, p. 212.
Hab. — Ile du Nord : Mont Taupiri ; Chaîne des Monts Hunua ; Waimarama.

71. *F. chordata*, Pfeiffer, sp., 1862.

Descript. — Pfeiffer, *Malak. Blätter*, vol. VIII, p. 147. — Pfeiffer, *Mon. Hel. viv.*, vol. V, p. 72. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 6. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 5. — *Trans. N. Zeal. Inst.*, vol., XVI, p. 194.
Hab. – Ile du Nord : Forty Mile Bush ; Whangarei ; Auckland.

Sous-Genre VIII. — ALLODISCUS, Pilsbry, 1892.

(*Psyra*, Hutton, 1884, *non* Stal., 1876)

Pilsbry, *Nautilus*, vol. VI (Sept. 1892), N° V, p. 56.

Observ. — D'après M. Ancey, cette section serait synonyme de son genre *Monomphalus* (18~~6~~82), mais, l'armature linguale des espèces de chacun des deux groupes n'ayant encore été l'objet d'aucune étude comparative, il nous paraît hasardeux de les considérer comme identiques l'une avec l'autre, dans l'état actuel des connaissances.

72. *F. dimorpha*. Pfeiffer, sp., 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXVIII, fig. 775. — Tryon, *Man. Conch.* (2), vol. II, pl. LXII, fig. 39.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 148 (1854). — Reeve, *Conch. Icon.*, *Helix*, sp. 775. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 68. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 8. — Hutton, *Man. N. Zeal, Moll.*, 1880, p. 6. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 201. — Tryon, *Man. Conch.* (2), vol. II, p. 211.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 161 ; pl. IX, fig. 5 (radule).

Hab. — Ile du Nord : Auckland ; Thames ; Wellington ; Ohaupo ; Forty Mile Bush.

73. *F. Tullia*, Gray, sp., 1850 (pl. IX, fig. 2, 2^a, 2^b, 2^c).

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CCVII, fig. 1460. — Tryon, *Man. Conch.* (2), vol. II, pl. LXII, fig. 40.

Descript. — Gray, *P. Z. S.*, 1849, p. 165 (1850). — *Ann. Mag. N. H.* (2), vol. VII, p. 65. — Reeve, *Conch. Icon.*, *Helix*, sp., 1460. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 35. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 5. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 11. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 201. — Tryon, *Man. Conch.* (2), vol. II, p. 211.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 291 ; pl. XXI, fig. 18-19 (mâchoire, radule).

Hab. — Ile du Nord : Auckland (Greenwood) ; Wellington ; Forty Mile Bush ; Ohaupo ; Mont Pirongia ; Hawke's Bay. — Ile du Sud : Greymouth ; Oxford ; Canterbury ; Riccarton Bush ; Hooker Valley ; Albury.

74. *F. venulata*, Pfeiffer, sp., 1857.

Descript. — Pfeiffer, *P. Z. S.*, 1857, p. 108. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 163. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 18. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 10. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 201.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 165; pl. XI, fig. Y (mâchoire).

Hab. — Ile du Sud : Versant O. du Mont Cook; Greymouth; Boatman's.

75. *F. Cassandra*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 37-39.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 181, 201. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 66.

Hab. — Ile du Nord : Napier. ? Three Kings Ils.

76. *F. planulata*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. IX, pl. III, fig. 4-6.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 477. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 181, 202. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 67.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 181, pl. IX, fig. J. (radule).

Hab. — Ile du Nord : Auckland (Cheeseman); Thames; Forty Mile Bush; Hawke's Bay. — Ile du Sud : Greymouth; Boatman's; St-Helens; Amuri.

77. *F. Adriana*, Hutton, sp., 1883.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 175, 201. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 67.

Hab. — Ile du Nord : Napier; Forty Mile Bush; Mont Pirongia. — Ile du Sud : Presqu'île de Banks (Broun).

78. *F. Miranda*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 40-42.

Descript. — *a. coquille.* — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 180, 202. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 68.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 181.

Anat. — *op. cit.*, vol. XVI, p. 181, pl. IX, fig. W., pl. XI, fig. S. (radule ; mâchoire).

Hab. — Ile du Nord : Forty Mile Bush ; Mont Pirongia ; Chaîne des Monts Hunua ; Hawke's Bay. — Ile du Sud : Greymouth (Helms) ; Queenstown ; Boatman's ; Bealey.

79. *F. Godeti*, Suter, sp., 1891.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVII, fig. 8, *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 43-45.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIII p. 90. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 68.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 91, pl. XVII, fig. O. P. (mâchoire ; radule).

Hab. — Ile du Sud : Hooker Valley (Suter).

80. *F. Wairoaensis*, Suter, 189~~3~~.4

Illustr. — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2).

Descript. — Suter, *op. cit.*

Hab. — Ile du Sud : Wairoa Gorge ; Nelson.

81. *F. Urquharti*, Suter, 189~~3~~.4

Illustr. — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2).

Descript. — Suter, *op. cit.*

Anat. — *Op. cit.* (dentition).

Hab. — Ile du Nord : Mont Pirongia (Urquhart) ; Chaîne des Monts Hunua.

82. *F. Smithi*, Suter, 189~~3~~.4

Illustr. — *Trans. N. Zeal Inst.*, vol. XXVI.

Descript. — Suter, *op. cit.*

Anat. — *Op. cit.* (dentition).

Hab. — Ile du Sud.

83. *F. rustica*, Suter, 189~~3~~.4

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXVI

Descript. — Suter, *op. cit.*

Hab. — Ile du Nord.

Sous-Genre IX. — SUTERIA, Pilsbry, 1892.

(*Charopa*, Hutton, 1884, *non* Albers, 1860. *Patulopsis*, Suter, 1891, *non* Strebel, 1879).

Pilsbry, *Nautilus*, vol. VI (sept. 1892), N° 5, p. 56.

84. *F. Ide*, Gray, sp., 1850.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXX, fig. 789. — *Conch. Cab.* (2), vol. I, Part. 2, pl. CLV, fig. 34-36. — Tryon, *Man. Conch.* (2), vol. II, pl. LXII, fig. 32-34.

Descript. — *a. coquille.* — Gray, *P. Z. S.*, 1849, p. 166 (1850). *Ann. Mag. N. H.* (2), vol. VII, p. 66. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 108. — *Conch. Cab.* (2), vol. I, Part. 2, p. 460. — Reeve, *Conch. Icon.*, *Helix*, sp., 789. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 13. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 9. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 200. — Tryon, *Man. Conch.* (2), vol. II, p. 210.

b. animal. — *Trans. N. Zeal. Inst.*, vol XVI, p. 164.

Anat. — *Op. cit.*, vol. XVI, p. 164, pl. IX, fig. U. (radule).

Hab. — Ile du Nord : Auckland (Greenwood ; Napier ; Wellington ; Forty Mile Bush ; Thames ; Titirangi ; Mont Pirongia ; Chaîne des Monts Hunua ; Heretaunga). — Ile du Sud : Greymouth ; Wairoa Gorge ; Nelson ; Boatman's.

Sous-Genre X. — THALASSOHELIX, Pilsbry, 1892.

Thalassia, Hutton (? et Albers), *non* Chevrolat 1834 (*Coléopt.*).

Pilsbry, *Nautilus*, vol. VI (sept. 1892), N° 5, p. 56.

85. *T. Zelandiæ*, Gray, sp., 1843.

Illustr.— Reeve, *Conch. Icon.*, vol. VII, pl. CXXIX, fig. 780.— *Conch. Cab.* (2), vol. I, Part. 2, pl. CLVI, fig. 3-5.— Tryon, *Man. Conch.* (2), vol, II, pl. LXIII, fig. 63-64.

Descript. — Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 247. — *Revue Zool.*, vol. VII, p. 375. — Pfeiffer, *Mon. Hel. viv.* vol. I, p. 81. — *Conch. Cab.* (2), vol. I, Part. 2, p. 468. — Reeve, *Conch. Icon.*, *Helix*, sp. 780. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 7. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 19. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 203. — Tryon, *Man. Conch.* (2), vol. II, p. 214.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 169, pl. X, fig. E. (radule).

Hab. — Ile du Nord : Auckland ; Wellington ; Wanganui ; Napier ; Thames ; Whangarei ; Howick ; Chaîne des Monts Hunua ; Mont Pirongia.

Var. β. *Antipoda,* Hombron et Jacquinot, 1854.

Illustr. — *Voy. Pôle Sud,* vol. V, pl. VI, fig. 13-16. — Tryon, *Man. Conch.* (2), vol. II, pl, LXIII, fig. 65-67.

Descript. — *a. coquille.* — Hombron et Jacquinot, *Voy. Pôle Sud,* vol. V, p. 18. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 111. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 15. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 19. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 204. — Tryon, *Man. Conch.* (2), vol. II, p. 214.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 169.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 169. pl. X, fig. F. (radule).

Hab. — Ile du Sud : Greymouth. — Iles Chatham. — Iles Auckland (Hombron et Jacquinot).

86. *F. Aucklandica,* Le Guillou, sp. 1842, *em.* (*Auklandica*).

Descript. — Le Guillou, *Revue Zool.*, vol. V, p. 140. —

Pfeiffer, *Mon. Hel. viv.*, vol. I, p. 119. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 15. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 19. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 204. — Tryon, *Man. Conch.* (2), vol. II, p. 214.

Hab. — Iles Auckland (Le Guillou).

87. *F. ziczac*, Gould, sp., 1848.

Syn. — *Portia*, Gray, 1850; *collyrula*, Reeve, 1852, *kappa*, Pfeiffer, 185~~4~~.3

Illustr. — *U. S. Expl. Exp.* vol. XII, fig. 44, *a-c.* — Reeve, *Conch. Icon.*, vol. VII, pl, CXXXI, fig. 806; pl. CXXXII, fig. 811. — *Conch. Cab.* (2), vol. I, part. 2, pl. CLIV, fig. 15-18, 25-26. — Cox, *Mon. Austral. Land Shells*, pl. XIX, fig. 11, 11 a. — Tryon, *Man. Conch.*, vol. I, pl. LX, fig, 70-72; vol. II, pl. LXII, fig. 35-37, 56; pl. LXIII, fig. 60-62.

Descript. — Gould, *Proc. Boston Soc. N. H.*, vol. II, p. 166. — *U. S. Expl. Exp.*, vol. XII, p. 41. — *P. Z. S.*, 1849, p. 165; 1852, p. 58. — *Ann. Mag. N. H.* (2), vol. VII, p. 65. Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 154. — Reeve, *Conch. Icon.*, *Helix*, sp. 806, 811. — *Conch. Cab.* (2), vol. I, part. 2, p. 455. — Cox, *Mon. Austral. Land Shells*, p. 18. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 18. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 7, 10. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 203. — Tryon, *Man. Conch.* (2), vol. I, p. 252; vol. II, p. 210-213; vol. VIII, p. 69.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 165; pl. IX, fig. T. (radule).

Hab. — Ile du Nord : Cratère près Taiaimi ; Auckland ; Thames ; Pahautanui ; Chaîne des Monts Hunua.

88. *F. igniflua*, Reeve, sp., 1852.

Syn. — *Obnubila*, Reeve, 1852; *lambda*, Pfeiffer, 185~~4~~;3 *sigma*, Pfeiffer, *ms.*

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXVIII, fig. 774; pl. CXXX, fig. 792. — Tryon, *Man. Conch.* (2), vol. I, pl. XXVI, fig. 25, 27.

Descript. — *a. coquille.* — Reeve, *Conch. Icon.*, *Helix*, sp. 774, 792. — *P. Z. S.*, 1852, p. 57. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 84, 633; vol. IV, p. 98. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 9, 12. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 9, 11. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 203. — Tryon, *Man. Conch.* (2), vol. I, p. 129.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 165.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 151, pl. III, fig. C. M.; pl. IV, fig. I (mâchoire; radule).

Hab. — Ile du Nord : Napier. — Ile du Sud : Rangitira Bush; Temuka; Oxford; Dunedin; Hamilton; Burke's Pass; Dyer's Pass; Riccarton Bush.

89. *F. propinqua*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXII, fig. 55-57.

Descript. — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 137; vol. XVI, p. 203.— Pilsbry, *Man. Conch.* (2), vol. VIII, p. 72.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 169; pl. X, fig. G; pl. XI, fig. V (radule; mâchoire).

Hab. — Ile du Nord : Auckland; Hawke's Bay; Dannevirke. — Ile du Sud : Weka Pass (Chelton); Southland.

Genre XVIII. — ENDODONTA (Albers, 1850) Suter.

(Suter, *Proc. Linn. Soc. N. S. W.*, vol. VIII) (2).

Sous-genre I. — ENDODONTA, Albers, 1850 (*S. str.*).

Albers, *Heliceen*, éd. I, p. 89. 1850.

Section I. — *Thaumatodon*, Pilsbry, 1893.

(= *Pitys*, Pease (*pro parte*), *non Pitys*, Beck).
Pilsbry, *Man. Conch.* (2), vol. IX, p. 26.

90. *E. varicosa*, Pfeiffer, sp., 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXIII, fig. 824. — Tryon, *Struct. Syst. Conch.*, vol. III, pl. XCIV, fig. 12. — Tryon, *Man. Conch.* (2), vol. III, pl. III, fig. 10. — *Trans. N. Zeal. Inst.*, vol. XXVI.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 148 (1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 97. — Reeve, *Conch. Icon.*, *Helix*, sp., 824. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 11. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 7. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 192. — Tryon, *Man. Conch.*, (2), vol. III, p. 23.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 293; pl. XXII, fig. 28-29 (radule anormale); — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2) (radule normale).

Hab. — Ile du Sud : Akaroa ; Riccarton Bush.

91. *E. Timandra*, Hutton, sp., 1883.

Syn. — *Varicosa*, Suter, *non* Pfeiffer, 1854.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIV, fig. 21-23. — *Trans. N. Zeal. Inst.*, vol. XXVI.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 475, — *Trans. N. Zeal. Inst.*, vol. XVI, p. 175, 192. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 84.

Hab. — Ile du Nord : Auckland ; Thames ; Whangarei ; Forty Mile Bush ; Chaîne des Monts Hunua ; Mont Pirongia ; Hawke's Bay ; Wellington.

92. *E. Jessica*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIV, fig. 24-27.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 475. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 174, 192. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 85.

Hab. — Ile du Sud : Bealey (Haast) ; Kenepuru Sound.

93. *E. cryptobidens*, Suter, 1891.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVII, fig. 7, *a*, *c*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIV, fig. 28-31.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIII, p. 89. — Pilsbry, *Manuel Conch.* (2), vol. VIII, p. 85.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 89, pl. XVII, fig. M, N (mâchoire ; radule).

Hab. — Ile du Sud : Hooker Valley (Suter).

Section 2. — PTYCHODON, Ancey, 1888.

(*Strobila,* Hutton, 1883, *non* Morse, 1864 ; *Huttonella,* Suter, 1890, *non* Pfeiffer, 1855 ; *Maoriana,* Suter, 1891).

Ancey, *Bull. Soc. Malac. France,* vol. V, Mars 1888, p. 372.

94. *E. leioda*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIV, fig. 32-35.

Descript. — *a. coquille.* — Hutton. *Trans. N. Zeal. Inst.*, vol. XV, p. 135 ; XVI, p. 195. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 87.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XV, p. 136.

Anat. — *Op. cit.*, vol. XVI, p. 166 ; pl. IX, fig. P.

Hab. — Ile du Sud : Greymouth (Helms).

95. *E. pseudoleioda*, Suter, sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XIV, fig. 1, *a*, *c*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIV, fig. 40-43.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 221. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 88.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 298, pl. XXIII, fig. 43-44 (mâchoire ; radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter) ; Ohaupo, Wangharei ; Auckland ; Mont Pirongia ; Heretaunga ; Waimarama. — Ile du Sud.

96. *E. Wairarapa,* Suter, sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XIV, fig. 2, *a, c.* — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIV, fig. 36-39.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 222. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 88.

Anat. — *Trans. N. Zeal. Inst.,* vol. XXIV, p. 298 ; pl. XXIII, fig. 45 (radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter) ; Waimamara. — Ile du Sud : Greymouth.

97. *E. Hectori,* Suter, sp., 1890.

Syn. — *Magdalenœ,* Ancey, 1891.

Illustr. — *Trans. N. Zeal. Inst.,* vol. XXII, pl. XIV, fig. 3. *a, c.* — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIV, fig. 44-47.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 222. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 89. — *British Naturalist,* Ap. 1891, p. 65.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 299, pl. XXIII, fig. 46-47 (mâchoire, radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter); Auckland ; Ohaupo ; Whangarei. — Ile du Sud.

98. *E. microundulata*, Suter, sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XIV, fig. 4, *a-d.* — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIV, fig. 52-56.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 223. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 89.

Anat. — *Trans. N. Zeal. Inst.,* vol. XXIV, p. 299, pl. XXIII, fig. 49-50 (mâchoire ; radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter); Waimarama. — Ile du Sud : Greymouth.

99. *E. Aorangi,* Suter, sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.,* vol. XXII, pl. XI, fig. V 5, *a-c.* — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIV, fig. 48-51.

Descript. — Suter, *Trans. N. Zeal. Inst.,* vol. XXII, p. 223. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 90.

Anat. — *Trans. N. Zeal. Inst.,* vol. XXIV, p. 300, pl. XXIII, fig. 51-52 (mâchoire ; radule).

Hab. — Ile du Sud : Hooker Valley (Suter).

100. *E. Hunuaensis*, Suter, 189~~3~~.4

Illustr. — *Proc. Linn. Soc. N. S. W.* vol. VIII (2).

Descript. —Suter, *op. cit.*

Hab. — Ile du Nord : Chaîne des Monts Hunua (Broun); Mont Taupiri; Waimarama. — Ile du Sud.

Sous-Genre II. — Charopa, Albers, 1860.

(*Patula, auct., non* Held. *Simplicaria,* Mousson, ms.).
Albers, *Heliceen* (2me édit.), p. 87, 1860.

101. *E. coma*, Gray, sp., 1843.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXX, fig. 796, pl. CXXXI, fig. 800. — *Conch. Cab.* (2), vol. I, Part. 2, pl. CLIV, fig. 37-39. — Cox, *Mon. Austral. Land Shells,* pl. XVII, fig. 4. — *Voy. Erebus and Terror,* vol. II, *Moll.*, pl. I, fig. 3. — Pilsbry, *Man. Conch.* (2), vol. IX, pl. IV, fig. 1-3.

Descript. — *a. coquille.* — Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 263. — Pfeiffer, *Mon. Hel. viv.*, vol. I, p. 113; vol. III, p. 99. — Reeve, *Conch. Icon. Helix*, sp. 796. — *Conch. Cab.* (2), vol. I, Part. 2, p. 461. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 11. — Hutton, *Man. N. Zeal Moll.*, 1880, p. 8. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 191. — Tryon, *Man. Conch.* (2), vol. III, p. 22.

b. animal. — *Trans. N. Zeal. Inst.,* vol. XVI, p. 162.

Anat. — *Op. cit.*, vol. XVI, p. 162, pl. IX, fig. C; pl. XI, fig. K (radule; mâchoire).

Hab. — Ile du Nord : Espèce répandue partout. — Ile du Sud : Lac Guyon ; Greymouth ; Bealey ; Boatman's.

Obs. — C'est par erreur que cette espèce a été citée comme de Tasmanie ; elle ne s'y trouve point.

Var. β. *Globosa*, Suter, 1892.

Syn. — *Var. beta*, Pfeiffer, 1853.

Descript. — Suter. *Trans. N. Zeal. Inst.*, vol. XXIV, p. 273. — Pfeiffer, *Mon. Hel. viv.* vol. III, p. 99. — *Conch. Cab.* (2), vol. I, part. 2, p. 461. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 96.

Hab. — Ile du Nord : Forty Mile Bush (Suter).

102. *E. egesta*, Gray, sp., 1850.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXI, fig. 798. — *Conch. Cab.* (2), vol. I, part. 2, pl. CLV, fig. 18-20. — Tryon, *Man. Conch.* (2), vol. III, pl. III, fig. 15.

Descript. — Gray, *P. Z. S.*, 1849, p. 166 (1850). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 102. — Reeve, *Conch. Icon.*, *Helix*, sp., 798. — *Conch. Cab.* (2), vol. I, Part. 2, p. 458. — *Ann. Mag. N. H.* (2), vol. VII, p. 66. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 12. — Hutton, *Manual N. Zeal. Moll.*, 1880, p. 8. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 193. — Tryon, *Manual Conch.* (2), vol. I, p. 23.

Hab. — Ile du Nord : Auckland (Greenwood) ; Orakei.

Obs. — Il est très probable que l'examen ultérieur de la radule prouvera que cette coquille doit être classée dans le genre *Flammulina* et peut-être dans la section *Suteria*.

103. *E. buccinella*, Reeve, sp., 1852.

Syn. — *Gamma*, Pfeiffer, 185~~4~~3 ; *Sylvia*, Hutton, 1883 ; *tau*, Suter, *non* Pfeiffer.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXIII, fig. 821. — Tryon, *Man. Conch.* (2), vol. III, pl. III, fig. 11.

Descript. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, sp., 821. — Pfeiffer, *P. Z. S.* 1852, p. 57 (1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 100. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 12. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 8. — *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 175, 193. — Tryon, *Man. Conch.* (2), vol. III, p, 23 ; vol. VIII, p. 98.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 293, pl. XXI, fig. 24, 25 (mâchoire ; radule).

Hab. — Ile du Nord : Auckland ; Hawke's Bay ; Thames ; Forty Mile Bush ; Ohaupo ; Chaîne des Monts Hunua, Mont Pirongia. — Ile du Sud : Dunedin ; Greymouth ; Oxford ; Hooker Valley. — Iles Auckland.

Var. β. *Serpentinula,* Suter, 1891.

Illust. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVI, fig. 5, *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 34-36.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIII, p. 87. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 103.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 87, pl. XVI, fig. H. I.

Hab. — Ile du Sud.

104. — *E. anguiculus,* Reeve, sp., 1852.

Syn. — *Theta,* Pfeiffer, ms.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl, CXXXI, fig. 802. — Tryon, *Man. Conch,* (2), vol. III, pl. III, fig. 13.

Descript. — *a. coquille.* — Reeve, *Conch. Icon.*, *Helix,* sp. 802. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 634. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 14. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 9.— *Trans. N. Zeal.*, vol. XVI, p. 163, 192. — Tryon, *Man. Conch.* (2), vol. III, p. 23.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 163.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 163, pl. IX, fig. E (radule).

Hab. — Ile du Nord : Forty Mile Bush ; Howick. — Ile du Sud : Hooker Valley ; Riccarton Bush ; Boatman's. — Iles Auckland.

Var. β. *Montivaga*, Suter, 189~~3~~.4

Syn. — *buccinella*, Hutton et Suter, *non* Reeve.

Illustr. — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2).

Descript. — Suter, *op. cit.* — *Trans. N. Zeal. Inst.*, vol. XVI, p. 192.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 163, pl. IX, fig. D (radule).

Hab. — Ile du Nord. — Ile du Sud.

Var. γ. *Fuscosa*, Suter, 189~~3~~. 4

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXVI.

Hab. — Ile du Nord.

105. *E. corniculum*, Reeve, sp., 1852.

Syn. — *Eta*, Pfeiffer, 185~~4~~.3

Illustr. — *Conch. Icon.*, vol. VII, *Helix*, pl. CXXXIII, fig. 826. — Tryon, *Man. Conch.* (2), vol. III, pl. III, fig. 12.

Descript. — *a. coquille.* — Reeve. *Conch. Icon.*, *Helix*, sp. 826. — *P. Z. S.*, 1852, p. 57. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 107. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 14. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 9. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 192. — Tryon, *Man. Conch.* (2), vol. III, p. 24.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 164.

Anat. — *Trans. N. Zeal Inst.*, vol. XVI, p. 164, pl. IX, fig. F.

Hab. — Ile du Nord : Auckland ; Hawke's Bay ; Thames ; Wellington ; Forty Mile Bush ; Howick ; Whangarei ; Ohaupo. — Ile du Sud : Oxford ; Christchurch ; Eyreton.

Var. β. *Maculata,* Suter, 1891.

Descript. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 89. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 96.

Hab. — Ile du Nord : Ohaupo ; Auckland ; Chaîne des Monts Hunua. — Ile du Sud : Hooker Valley (Suter) ; Akaroa.

106. *E. infecta,* Reeve, sp., 1852.

Syn. — *Zeta*, Pfeiffer, 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXII, fig. 808. — *Conch. Cab.* (2), vol. I, part. 2, pl. CLV, fig. 27-30. — Tryon, *Mon. Conch.* (2), vol. III, pl. III, fig. 14.

Descript. — *a. coquille.* — Reeve, *Conch. Icon.*, *Helix*, sp. 808. — *P. Z. S.*, 1852, p. 58 (1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 109. — *Conch. Cab.* (2), vol. I. Part. 2, p. 459. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 14. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 9. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 193. — Tryon, *Man. Conch.* (2), vol. III, p. 23.

b. animal. Trans. N. Zeal. Inst., vol. XVI, p. 164.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 164, pl. IX, fig. H (radule).

Hab. — Ile du Nord : Hawke's Bay ; Forty Mile Bush ; Whangarei ; Ohaupo. — Ile du Sud : Greymouth ; Oxford ; Bealey ; Riccarton Bush.

Var. β. *Irregularis*, Suter, 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XIV, fig. 6 *a*, *b*. — Pilsbry, *Man. Conch.*, (2), vol. VIII, pl. XIX, fig. 13-15.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 224. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 98.

Hab. — Ile du Nord : Forty Mile Bush (Suter). — Ile du Sud.

Var. γ. Alpestris, Suter, 1891.

Descript. – Suter, *Trans. N. Zeal. Inst.*, vol. XXIII, p. 88. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 99.

Hab. – Ile du Sud : Hooker Valley (Suter).

107. *E. biconcava*, Pfeiffer, sp. 1854.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXII, fig. 810. — *Conch. Cab.* (2), vol. I, part. 2, pl. CLV, fig. 43-47. — Tryon, *Man. Conch.* (2), vol. I, pl. XXIV, fig. 75.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 149 (1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 109. — Reeve, *Conch Icon., Helix*, sp. 810. — *Conch. Cab.* (2), vol. I, part. 2, p. 458. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 13. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 11. — *Trans. N. Zeal., Inst.*, vol. XVI, p. 193. — Tryon, *Man. Conch.* (2), vol, I, p. 130.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 295, pl. XXII, fig. 30-31 (mâchoire ; radule).

Hab. – Ile du Nord : Thames ; Wellington ; Forty Mile Bush ; Heretaunga.

108. *E. caput-spinulæ,* Reeve, sp., 1852.

Syn. – *Epsilon*, Pfeiffer, 185~~4~~. 3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXIII, fig. 818. — Tryon, *Man. Conch.* (2), vol. III, pl. XX, fig. 53.

Descript. — Reeve, *Conch. Icon.*, *Helix*, vol. VII, sp., 818. — *P. Z. S.*, 1852, p. 57 (1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 97. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 11. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 23. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 194. — Tryon, *Man. Conch.* (2), vol. III, p. 102.

Anat. — Suter, *Trans. N. Zeal. Inst.*, vol. XXVI (mâchoire ; radule).

Hab. – Ile du Nord : Auckland ; Horokiwi ; Thames ;

Whangarei; Chaîne des Monts Hunua; Mont Pirongia; Waimarama. — Ile du Sud : Riccarton Bush; Dyer's Pass; Akaroa.

109. *E. Tau*, Pfeiffer, sp., 1862.

Syn. — *Mutabilis*, Suter, 1891. — *Sylvia*, Sut~~t~~er, *non* Hutton, 1883.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVI, fig. 2 *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 25-27.

Descript. — Pfeiffer, *Malak. Blätter*, vol. VIII, p. 148. — Pfeiffer, *Mon. Hel. viv.*, vol. V, p. 159. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 12. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 8.— *Trans. N. Zeal. Inst.*, vol. XXIII, p. 84. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 101.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 85, pl. XVI, fig. B, C (mâchoire; radule).

Hab. — Ile du Sud : Bealey; Riccarton Bush.

110, *E. modicella*, Férussac, sp., *var. vicinalis*, Mousson, 1873.

Descript. — Mousson, *Journ. de Conch.*, vol. XXI, p, 112. — Tryon, *Man. Conch.* (2), vol. III, p. 39.

Hab. — Iles Kermadec.

111. *E. Bianca*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXXVII, fig. 41, 42.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 475. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 175, 192.— Pilsbry, *Man. Conch.* (2), vol. VIII, p. 97.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 292, pl. XXI, fig. 20, 21 (mâchoire; radule).

Hab. — Ile du Nord : Auckland; Horokiwi; Thames; Forty Mile Bush; Hawke's Bay. — Ile du Sud : Greymouth (Helms); Bealey; Hooker Valley; Akaroa; Riccarton Bush.

Var. β. *Montana,* Suter, 1890.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIII, p. 88. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 97.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 88, pl. XVII, fig. K, L (mâchoire; radule).

Hab. — Ile du Sud : Hooker Valley (Suter).

112. *E. tapirina,* Hutton, sp., 1883.

Syn — *Coma,* Hutton, *non* Gray, 1843.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. IX, pl. ~~IV~~,VI fig. ~~4-6.~~ 63-65

Descript. — *a. coquille.* — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 134; vol. XVI, p. 193. — Tryon, *Man. Conch.* (2), vol. III, p. 23; vol. VIII, p. 97.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 165.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 150, pl. III, fig. A. L., pl. IV, fig. G; vol. XVI, p. 165, pl. IX, fig. G (mâchoire; radule).

Hab. — Ile du Nord : Auckland; Hawke's Bay ; Masterton ; Wellington ; Thames ; Forty Mile Bush ; Chaîne des Monts Hunua. — Ile du Sud : Dunedin (Hutton) ; Queenstown ; Greymouth ; Temuka ; Owaka ; Wairoa Gorge ; Nelson.

113. *E. Lucetta,* Hutton, sp., 1884.

Syn. — *Stokesi,* Smith, 1884.

Illust. — *P. Z. S.*, 1884, pl. XXIII, fig. 17 *a*, *b*. — Tryon, *Man. Conch.* (2), vol. III, pl. III, fig. 7-9; pl. XXII, fig. 48-50.

Descript. — *a. coquille.* — Hutton, *Trans. N. Zeal. Inst.*, vol. XVI p. 162, 192. — *P. Z. S.*, 1884, p. 275. — Tryon, *Man. Conch.* (2), vol. III, p. 22, 262.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 162.

Anat. — *Trans. N. Zeal Inst.*, vol. XVI, p, 162, pl. XI, fig. A (radule).

Hab. — Ile du Nord : Hawke's Bay (Colenso); Wellington; Forty Mile Bush. — Ile du Sud : Greymouth ; Nelson.

114. *E. variecostata*, Suter, sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XIV, fig. 8, *a-c*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 19-21.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 225. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 100.

Hab. — Ile du Nord : Forty Mile Bush (Suter).

115. *E. Colensoi*, Suter, sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XIV, fig. 7, *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 16-18.

Descript. — Suter, *Trans. N Zeal. Inst.*, vol. XXII, p. 225. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 99.

Anat. — *Trans, N. Zeal. Inst.*, vol. XXIV, p. 293, pl. XXI, fig. 26, 27 (mâchoire ; radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter); Heretaunga ; Waimarama.

116. *E. subantialba*, Suter, sp., 1890

Illustr.— *Trans. N. Zeal. Inst.*, vol. XXII, pl. XV, fig. 10, *a*, *b*.— Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 40-42.

Descript — Suter, *Trans. N. Zeal. Inst.*, vol. XXII p. 226. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 104.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 295, pl. XX, fig. 32, 33 (mâchoire ; radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter) ; Auckland ; Chaîne des Monts Hunua ; Waimarama.

117. *E. Moussoni*, Suter sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XV, fig. 12, *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 46-48.

Descript. — Suter, *Trans. N. Zeal. Inst.* vol. XXII, p. 227, — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 105.

Hab. — Ile du Nord : Forty Mile Bush (Suter).

118. *E. Huttoni*, Suter, sp., 1890

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XV, fig. 11, *a*, *b*. — Pilsbry, *Man. Conch.* (2) vol. VIII, pl. XIX, fig. 43-45.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 226. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 104.

Hab. — Ile du Nord : Forty Mile Bush (Suter) ; Mont Pirongia.

119. *E. Sterkiana*, Suter, sp., 1891.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVI, fig. 3. *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 28-30.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIII, p. 85. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 101.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 85, pl. XVI, fig. D, E (mâchoire ; radule).

Hab. — Ile du Sud : Hooker Valley (Suter).

Var. β. *Major*, Suter, 1892.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIV, p. 295.

Hab. — Ile du Sud : Owaka (Bryant).

Var. γ. *Reeftonensis*, Suter, 1892.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIV, p. 294. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 102.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 295 (dentition).

Hab. — Ile du Sud : Boatman's, près Reefton (Cavell).

120. *E. Brouni*, Suter, sp., 1891.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVI, fig. 4 *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 31-33.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIII, p. 86. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 102.

Anat. — *Trans. N. Zeal., Inst.*, vol. XXIII, p. 86, pl. XVI, fig. F, G (mâchoire ; radule).

Hab. — Ile du Sud : Hooker Valley (Suter); Riccarton Bush.

121. *E. eremita*, Suter, sp., 1891.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVII, fig. 6 *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 37-39.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIII, p. 87. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 103.

Hab. — Ile du Sud : Hooker Valley (Suter).

122. *E. pseudocoma*, Suter, 189~~3~~.4

Illustr. — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2).

Descript. — *a. coquille.* — Suter, *op. cit.*

b. animal. — Suter, *op. cit.*

Anat. — Suter, *op. cit.* (dentition).

Hab. — Ile du Sud : Akaroa ; Port Hills ; Littleton ; Dyer's Pass ; Riccarton Bush (Suter).

123. *E. segregata*, Suter, 189~~1~~.4

Illustr. — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2).

Descript. — Suter, *op. cit.*

Hab. — Ile du Nord : Waimarama (Hamilton).

Sous-Genre III. — PHENACHAROPA, Pilsbry, 1893.

Pilsbry, *Manual Conch.* (2), vol. IX, p. 29, 1893.— *Pupa, auctorum, non* Draparnaud. — *Tesseraria*, Boettger, *non* Haeckel.

124. *E. Novoseelandica*, Pfeiffer, sp., 185~~4~~.3
(Pl. IX, fig. 3, 3^a, 3^b).

Illustr. — Reeve, *Conch. Icon.*, vol. XX, pl. XIV, fig. 126. — *Conch. Cab.* (2), vol. I, part. 15, pl. XVII, fig. 18, 19. — *Trans. N. Zeal. Inst.*, vol. XXVI.

Descript. — *a. coquille.*— Pfeiffer, *P. Z. S.*,, 1852, p. 149 (1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 530. — Reeve, *Conch. Icon.*, *Pupa*, sp., 126. — *Conch. Cab.* (2), vol. I, part. 15, p. 135. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 22. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 15. — E. v. Martens. *Conch. Mittheil.*, vol. I, p. 69. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 191.

b. animal. — Suter, *Trans. N. Zeal. Inst.*, vol. XXVI.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 300, pl. XXIII, fig. 53, 54 (mâchoire; radule).

Hab. — Ile du Nord : Hawke's Bay; Forty Mile Bush; Auckland.

Sous-Genre IV. — AESCHRODOMUS, Pilsbry, 1892.
(*Thera*, Hutton, 1884, *non* Stephens, 1831).

Pilsbry, *Nautilus*, vol. VI (Sept. 1892), N° 5, p. 55, note marginale.

125. *E. stipulata*, Reeve, sp., 1852 (pl. IX, fig. 4, 4^a, 4^b, 4^c).

Syn. — *alpha*, Pfeiffer, 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXII, fig. 813. — Tryon, *Man. Conch.* (2), vol. III, pl. XIX, fig. 1.

Descript. — *a. coquille.* — Reeve, *Conch. Icon.*, *Helix*, sp. 813. — *P. Z. S.*, 1852, p. 58 (1854). — Pfeiffer, *Mon.*

Hel. viv., vol. III, p. 112. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 16. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 18. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 193. — Tryon, *Man. Conch.* (2), vol. III, p. 94.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 168.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 168, pl. XI, fig. B, L.; vol. XXIV, p. 296, pl. XXII, fig. 34, 35 (mâchoire; radule).

Hab. — Ile du Nord : Auckland; Petane; Napier; Thames. — Ile du Sud : Greymouth; Temuka; Dunedin; Queenstown; Owaka.

126. *E. barbatula*, Reeve, sp., 1852.

Syn. — *beta*, Pfeiffer, 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXII, fig. 814. — *Conch. Cab.* (2), vol. I, part. 2, pl. CLV, fig. 53-56. — Tryon *Man. Conch.* (2), vol. III, pl. XIX, fig. 2.

Descript. — Reeve, *Conch. Icon.*, *Helix*, sp. 814. — *P. Z. S.*, 1852, p. 58 (1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 112. — *Conch. Cab.* (2), vol. I. part. 2, p. 462. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 16. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 18. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 285. — Tryon, *Man. Conch.* (2), vol. III, p. 95.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 296, pl. XXII, fig. 36, 37.

Hab. — Ile du Sud : Dunedin.

Groupe POLYPLACOGNATHA.

Genre XIX. — LAOMA (Gray, 1850), Pilsbry, 1892.

Pilsbry, *Proc. Acad. N. Sc. Philadelphia*, 1892, p. 403.

Sous-Genre I. — LAOMA, Gray, 1850 (s. str.).

(*Endodonta*, Hutton, *non* Albers, 1850).

Gray, *P. Z. S.*, 1849, p. 167 (1850).

127. *L. leimonias*, Gray, 1850.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXIII, fig. 8~~15~~20. — Tryon, *Man. Conch.* (2), vol. III, pl. XIII, fig. 55.

Descript. — Gray, *P. Z. S.*, 1849, p. 167 (1850). — *Ann. Mag. N. H.* (2), vol. VII, p. 67. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 144. — Reeve. *Conch. Icon.*, *Helix*, sp. 8~~15~~20. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 16. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 21. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 195. — Tryon, *Man. Conch.* (2), vol, III, p. 68.

Anat. — Suter, *Trans. N. Zeal. Inst.*, vol. XXVI (mâchoire ; radule).

Hab. — Ile du Nord : Auckland (Greenwood) ; Howick ; Chaîne des Monts Hunua; Thames; Ohaupo; Mont Pirongia; Hawke's-Bay.

128. *L. pœcilosticta*, Pfeiffer, sp., 185~~4~~3, *em.* (*pœcilocostata*).

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXII, fig. 815. — *Conch. Cab.* (2), vol. I, part. 2, pl. CLVI, fig. 11-13. — Tryon, *Man. Conch.* (2), vol. III, pl. XIII, fig. 56.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 147 (1854). — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 59. — Reeve, *Conch. Icon.*, *Helix*, sp., 815. — *Conch. Cab.* (2), vol. I, part. 2, p. 470. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 8. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 17. — *Trans. N. Zeal. Inst.* vol. XVI, p. 195. — Tryon, *Man. Conch.* (2), vol. III, p. 68.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 168 (radule).

Hab. — Ile du Nord : Auckland ; Thames ; Whangarei ; Chaîne des Monts Hunua ; Mont Pirongia ; Mont Taupiri ; Napier ; Wellington.

129. *L. marina*, Hutton, 1883 (pl. IX, fig. 6, 6^a, 6^b).

Syn. — *Nerissa* Hutton, 1883, *juv.*

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 17-20. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 284.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 176, 196; vol. XXIV, p. 283. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 57.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 298, pl. XXIII, fig. 41, 42 (mâchoire; radule).

Hab. — Ile du Nord : Auckland (Cheeseman); Forty Mile Bush; Thames; Chaîne des Monts Hunua; Mont Pirongia; Hawke's Bay. — Ile du Sud.

130. *L. Pirongiaensis*, Suter, 189~~3~~.4

Illustr. — *Proc. Linn. Soc. N. S. W.*, vol. VIII (2).

Descript. — Suter, *op. cit.*

Hab. — Ile du Nord : Mont Pirongia (Urquhardt).

131. *L. ciliata*, Suter, 189~~3~~.4

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXVI.

Descript. — Suter, *op. cit.*

Anat. — Suter, *op. cit.* (dentition).

Hab. — Ile du Nord.

Sous-genre II. — PHRIXGNATHUS, Hutton, 1883.

Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 136.

•132. *L. Mariæ*, Gray, sp., 1843.

Syn. — *Umbraculum*, Pfeiffer, 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXI, fig 804. — *Conch. Cab.* (2), vol. I, Part. 2, pl. CLV, fig. 40-42. — *Voy. Erebus et Terror*, vol. II, *Moll.*, pl. I, fig. 2. — Tryon, *Man. Conch.* (2), vol. III, pl. XXI, fig. 11.

Descript. — Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 262. — *P. Z. S.*, 1852, p. 147. — Reeve, *Conch. Icon.*, *Helix*, sp. 804. — Pfeiffer, *Mon. Hel. viv.*, vol. I, p. 81. — *Conch. Cab.* (2), vol. I, Part. 2, p. 462. — *Cat. Brit. Mus. Pulmonata*, p. 135. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 5. — Hutton, *Man. N. Zeal, Moll.*, 1880, p. 25. — *Trans. N. Zeal.*

Inst., vol. XVI. p. 196. — Tryon, *Man. Conch.* (2), vol. III, p. 37.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 172, pl. IX, fig. R. (radule).

Hab. — Ile du Nord : Auckland ; Wellington ; Forty Mile Bush ; Thames ; Whangarei ; Ohaupo ; Chaîne des Monts Hunua ; Mont Pirongia ; Heretaunga.

133. *L. Erigone*, Gray, sp., 1850.

Syn. — *Heldiana*, Pfeiffer, 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXIII, fig. 817. — Tryon, *Man. Conch.* (2), vol. III, pl. XXI, fig. 13.

Descript. — Gray, *P. Z. S.*, 1849, p. 165 (1850. — *Ann. Mag. N. H.* (2), vol. VII, p. 65. — *P. Z. S.* 1852, p. 148. — Reeve, *Conch. Icon.*, *Helix*, sp. 817. — Pfeiffer, *Mon. Hel. Viv.*, vol. III, p. 60. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 7, 8. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 17, 18. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 197. — Tryon, *Man. Conch.* (2), vol. III, p. 37.

Hab. — Ile du Nord : Auckland (Greenwood) ; Howick ; Chaîne des Monts Hunua ; Thames ; Ohaupo ; Mont Pirongia ; Hawke's Pass.

134. L. *glabriuscula*, Pfeiffer, sp., 1853.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CXXXIII, fig. 822. — *Conch. Cab.* (2), vol. I. Part. 2, pl. CLVI, fig. 14-16. — Tryon, *Man. Conch.* (2), vol. III, pl. XXI, fig. 14.

Descript. — Pfeiffer, *P. Z. S.* 1851, p. 262 (1853). — Reeve, *Conch. Icon.*, *Helix*, sp. 822. — *Conch. Cab.* (2), vol. I, part. 2, p. 470. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 51. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 6. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 23. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 197. — Tryon, *Man. Conch.* (2), vol. III, p. 37.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 297, pl. XXII, fig. 38, 39 (mâchoire ; radule).

Hab. — Ile du Nord : Ohaupo ; Whangarei ; Auckland ; Mont Pirongia ; Hawke's Bay.

135. *L. regularis*, Pfeiffer, sp., 1855.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, pl. CLXXXII, fig. 1259. — Tryon, *Man. Conch.* (2), vol. III, pl. XXI, fig. 12.

Descript. — Pfeiffer, *P. Z. S.*, 1854, p. 50 (1855). — Reeve, *Conch. Icon.*, *Helix*, sp., 1259. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 33. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 7. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 17. — *Trans. N. Zeal, Inst.*, vol. XVI, p. 197. — Tryon, *Man. Conch.* (2), vol. III. p. 37.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 168, pl. XI, fig. D. (radule).

Hab. — Ile du Nord : Thames ; Forty Mile Bush. — Ile du Sud : Greymouth ; Riccarton Bush.

136. *L. sciadium*, Pfeiffer, sp., 1857.

Descript. — Pfeiffer, *P. Z. S.*, 1857, p. 108. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 112. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 15. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 19. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 197.

Hab. — Ile du Nord : Auckland ; Seventy Mile Bush.

137. *L. fatua*, Pfeiffer, sp., 1857.

Descript. — Pfeiffer, *P. Z. S.*, 1857, p. 107. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 30. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 7. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 19. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 197.

Hab. — Ile du Nord : Taupiri (Hochstetter) ; Auckland.

138. *L. conella*, Pfeiffer, sp., 1862.

Illustr. — Pilsbry, *Man. Conch.* (2), vol, VIII, pl. XXIII, fig. 16.

Descript. — Pfeiffer, *Malak. Blätter*, vol. VIII, p. 147. —

Pfeiffer, *Mon. Hel. viv.*, vol. V, p. 86. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 17. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 196. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 58.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 168 (dentition).

Hab. — Ile du Nord : Kakepuku (Hochstetter) ; Auckland; Thames ; Ohaupo ; Forty Mile Bush ; Horokiwi ; Wellington ; Chaîne des Monts Hunua ; Heretaunga ; Waimarama.

139. *L. Campbellica*, Filhol, sp., 1880.

Descript. — Filhol, *Bull. Soc. Philomathique*, vol. IV, p. 126. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 195.

Hab. — Ile Campbell (Filhol).

140. *L. Ariel*, Hutton, sp., 1883.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 177, 196. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 59.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 177 (dentition).

Hab. — Ile du Nord : Auckland (Cheeseman) ; Wanganui ; Whangarei ; Mont Pirongia ; Ohaupo.

141. *L. marginata*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 94-96.

Descript. — *a. coquille.* — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 137 ; vol. XVI, p. 196. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 60.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XV, p. 137.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 168, pl, IX, fig. S (radule).

Hab. — Ile du Sud : Greymouth (Helms).

142. *L. Celia*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. IX, pl. I, fig. 10.

Descript. — *a. coquille.* — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 176,197. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 60.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 176.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 153, pl. III, fig. F, N ; pl. IV, fig. N (radule, sous le nom de *H. fatua*).

Hab. — Ile du Nord : Wanganui ; Orokiwi ; Forty Mile Bush ; Chaîne des Monts Hunua ; Howick ; Thames. — Ile du Sud : Dunedin (Hutton) ; Milford Sound ; Greymouth ; Temuka : Boatman's ; Akaroa. — Ile Stewart.

143. *L. pumila,* Hutton, 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 97-99.

Descript. — *a. coquille.* — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 134 ; vol. XVI, p. 195. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 63.

b. animal. — *Trans. N. Zeal. Inst.*, vol. XV, p. 135.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 166, pl. IX, fig. Q (radule).

Hab. — Ile du Nord : Auckland ; Hawke's Bay. — Ile du Sud : Christchurch (Armstrong) ; Eyreton ; Dunedin.

144. *L. Phrynia,* Hutton, sp., 1883.

Illustr. Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 88-90.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 177, 197. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 61.

Hab. — Ile du Nord : Wanganui (T. W. Kirk) ; Whangarei ; Mont Pirongia ; Hawke's Bay.

145. *L. Titania*, Hutton, sp., 1883.

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 82-84.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 177, 198. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 62.

Hab. — Ile du Sud : Dunedin (Hutton).

146. *L. Haasti*, Hutton, sp., 1883 (pl. IX, fig. 5, 5 *a*, 5 *b*).

Illustr. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 91-93.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 476. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 177-198. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 62.

Hab. — Ile du Sud : Mont Somers (Haast) ; Akaroa ; St-Helens ; Amuri ; Riccarton Bush ; Albury Rocks.

147. *L. microreticulata*, Suter, sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XV, fig. 13 *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 13-15.

Descript. — Sutter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 227. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 63.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXVI (mâchoire ; radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter) ; Chaîne des Monts Hunua ; Mont Pirogia. — Ile du Sud : Dunedin ; Hooker Valley ; Boatman's.

148. *L. raricostata*, Suter, sp., 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XIV, fig. 9 *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XIX, fig. 22-24.

Descript. — Suter, *Trans. N. Zeal. Inst.* vol. XXII, p. 226. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 100.

Hab. — Ile du Nord : Forty Mile Bush (Suter); Hawke's Bay. — Ile du Sud : Dunedin.

149. *L. allochroida*, Suter, sp., 1890.

Illustr. — *Trans. N. Zeal Inst.*, vol. XXII, pl. XV, fig. 14 *a*, *c*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 3-6.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol., XXII, p. 228. — Pilsbry. *Man. Conch.* (2), vol. VIII, p. 63.

Hab. — Ile du Nord : Forty Mile Bush (Suter); Chaîne des Monts Hunua ; Mont Pirongia ; Hawke's Bay. — Ile du Sud : Hooker Valley.

Var. β. *Sericata*, Suter, 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol XXII, pl. XV, fig. 15 *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 7-9.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 228. — Pilsbry. *Man. Conch.* (2), vol. VIII, p. 64.

Hab. — Ile du Nord : Forty Mile Bush (Suter) ; Mont Pirongia.

Var. β. *Lateumbilicata*, Suter, 1890.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXII, pl. XV, fig. 16 *a*, *b*. — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 10-12.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXII, p. 228. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 64.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXVI (màchoire; radule).

Hab. — Ile du Nord : Forty Mile Bush (Suter); Ohaupo; Hawke's Bay.

150. *L. acanthinulopsis*, Suter, sp., 1891. x/

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVIII,

x/ = phrynia, Hutt.

fig. 11 *a. b.* — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 100-102.

Descript. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 92. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 61.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIII, p. 92; pl. XVIII, fig. S, T.

Hab. — Ile du Sud : Hooker Valley (Suter).

151. *L. transitans*, Suter, sp., 1892.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIV, pl. XXII, fig. 40 *a, b.* — Pilsbry, *Man. Conch.* (2), vol. VIII, pl. XXIII, fig. 85-87.

Descript. — Suter, *Trans. N. Zeal. Inst.*, vol. XXIV, p. 297. — Pilsbry, *Man. Conch.* (2), vol. VIII, p. 59.

Hab. — Ile du Nord : Whangarei (Musson); Chaîne des Monts Hunua.

152. *L. Murdochi*, Suter, 189~~3~~.4

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXVI.

Descript. — Suter, *op. cit.*

Hab. — Ile du Nord.

153. *L. Cheesemani*, Suter, 189~~3~~.4

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXVI.

Descript. — Suter, *op. cit.*

Anat. — *Op. cit.* (dentition).

Hab. — Ile du Nord.

Fam. ZONITIDÆ.

Genre XX. — HELICARION, Férussac fils, 1822.

A. E. Férussac, *Tableau systém. des anim. moll.*, p. 31.

154. *H. ultimus*, Mousson, sp., 1873.

Syn. — *Kermadecensis*, Smith, 1873. has priority

Illustr. — *Journ. de Conchyl.*, vol, XXI, pl. VII, fig. 1. — Tryon, *Man. Conch.* (2), vol. I, pl. XXXV, fig. 9-10.

Descript. — Mousson, *Journ. de Conchyl.*, vol. XXI, p. 110. — *Ann. Mag. N. H.* (4), vol. XI, p. 288. — Pfeiffer, *Mon. Hel. viv.*, vol. VII, p. 26, 515. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 204. — Tryon, *Man. Conch.* (2), vol. I, p. 158.

Hab. — Ile du Nord : Hobson's Glen ; Auckland. — Iles Kermadec.

Genre XXI. — OTOCONCHA, Hutton, 1884

Hutton, *Trans. N. Zeal. Inst.*, vol. XVI, p. 199.

155. *O. dimidiata*, Pfeiffer, sp., 185~~4~~ 3

Illustr. — Reeve, *Conch. Icon.*, vol. XII, *Vitrina*, pl. X, fig. 72. — Tryon, *Man. Conch.* (2), vol. I, pl. XLII, fig. 22.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 56 (1854). — Reeve, *Conch. Icon.*, *Vitrina*, sp., 72. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 6. — *Cat. Pulm. Brit. Mus.*, p. 71. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 2. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 12. — *Trans. N. Zeal. Inst.*, vol XVI, p. 199; vol. XXIII, p. 94. — Tryon, *Conch. Cab.* (2), vol. I, p. 181.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 166, pl. IX fig. Y, pl. XI, fig. O ; vol XXVI. (dentition).

Hab. — Ile du Nord : Auckland ; Thames ; Hawke's Bay ; Wellington ; Forty Mile Bush. — Ile du Sud : Boatman's ; Dyer's Pass.

Genre XXII. ARIOPHANTA, C. des Moulins, 1829.

(*Nanina*, Gray, 1834, *non* Risso, 1826).

C. des Moulins, *Actes Soc. Linnéenne de Bordeaux*, Tome III, p. 227, 1829.

156. *A. Novaræ*, Pfeiffer, sp., 1862

Descript. — Pfeiffer, *Malak. Blätter*. vol. VIII, p. 148. — Pfeiffer, *Mon. Hel. viv.*, vol. V, p. 169. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 13. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 13. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 205.

Anat. — Suter, *Trans. N. Zeal. Inst.*, vol. XXVI (dentition).

Hab. — Ile du Nord.

Genre XXIII. — Lamprocystis ~~MICROCYSTIS, Beck, 1837.~~

Beck, *Index Moll.*, p. 2, 1837.

157. *M. Kermadeci*, Pfeiffer, sp., 1857. *em. (Kermandeci).*

Descript. — Pfeiffer, *P. Z. S.*, 1856, p. 326 (1857). — *Journ. de Conchyl.*, vol. XXI, p. 111, 1873.

Hab. — Iles de Kermadec ; Raoul (Lieut^t Chimmo).

Genre XXIV. — TROCHONANINA, Mousson, 1869.

Mousson, *Journ. de Conchyl.*, vol. XVII, p. 330.

158. *T. exposita*, Mousson, 1873.

Illustr. — *Journ. de Conchyl.*, vol. XXI, pl. VII, fig. 2. — Tryon, *Man. Conch.* (2), vol. II, pl. XXIII, fig. 60.

Descript. — Mousson, *Journ. de Conchyl.*, vol. XXI, p. 111. — Tryon, *Man. Conch.* (2), vol. II, p. 47.

Hab. — Iles de Kermadec ; Raoul.

Fam. RHYTIDIDÆ.

Cette famille a été proposée par H. A. Pilsbry, qui y comprend les genres *Rhytida*, *Paryphanta*, *Schizoglossa*, *Rhenea*, *Diplomphalus* (*s. stricto*) et *Natalina*.

Genre XXV. — RHYTIDA, Albers, 1860.

Albers, *Heliceen*, 2^e édit., p. 89, 1860.

159. *R. Greenwoodi*, Gray, sp., 1850.

Syn. — *Gunni*, Gray, *ms.*

Illustr. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. LXXXI, fig. 434. — *Conch. Cab.* (2), vol. I, part. 2, pl. CVII, fig. 11-13. — Tryon, *Man. Conch.* (2), vol. I, pl. XXIV, fig. 74.

Descript. — Gray, *P. Z. S.*, 1849, p. 165 (1850). — *Ann. Mag. N. H.* (2), vol. VII, p. 65. — Reeve, *Conch. Icon.*, *Helix*, sp., 434. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 156. — *Conch. Cab.* (2), vol. I, part. II, p. 214. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 18. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 16. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 208. — *Zeitschr. f. Malak.*, 1850, p. 86. — Tryon, *Man. Conch.* (2), vol. I, p. 126.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 167, pl. X, fig. P. (radule).

Hab. — Ile du Nord : Auckland (Greenwood); Hawke's Bay ; Pukekohe ; Mont Taupiri.

160. *R. Dunniæ*, Gray, sp. 1840.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. LXXX, fig. 425.— *Voy. Erebus et Terror*, vol. II, *Moll.*, pl. I, fig. 7. — *Conch. Cab.* (2), vol. I, part. 2, pl. CXXVII, fig. 33-35. — Tryon, *Man. Conch.* (2), vol. I, pl. XXIV, fig. 73.

Descript. — Gray, *Ann. Mag. N. H.* (1), vol. VI, p. 317. — *Dienffenbach's N. Zeal.*, vol. II, p. 247. — *Revue Zool.*, vol. VII, p. 375. — Reeve, *Conch. Icon..*, *Helix*, sp. 425. — Pfeiffer, *Mon. Hel. viv.*, vol. I, p. 207. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 19. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 16. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 208. — Tryon, *Man. Conch.* (2), vol. I, p. 126.

Hab. — Ile du Nord : Baie des Iles ; Thames ; Auckland; Whangarei ; Howick.

Var. β, Pfeiffer, 1853.

Descript. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 160. — Tryon, *Man. Conch.* (2), vol. I, p. 126.

Hab. — Ile du Nord.

161. *R. patula*, Hutton, 1883.

Descript. — *a. coquille.* — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 138 ; vol. XVI, p. 208.

b. animal. — *Op. cit.*, vol. XV, p. 138.

Anat. — *Op. cit.*, vol. XVI, p. 167, pl. X, fig. Q (radule).

Hab. — Ile du Sud : Greymouth (Helms) ; Balclutha ; Boatman's.

162. *R. citrina*, Hutton, 1883.

Descript. — *a. coquille.* — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 139 ; vol. XVI, p. 208.

b. animal. — *Op. cit.*, vol. XV, p. 139.

Anat. — *Op. cit.*, vol. XVI, p. 167, pl. X, fig. R (radule).

Hab. — Ile du Sud : Greymouth (Helms) ; Buller River.

163. *R. australis*, Hutton, 1883.

Descript. — Hutton, *Trans. N. Zeal. Inst.*, vol. XV, p. 139 ; vol. XVI, p. 208.

Anat. — *Op. cit.*, vol. XVI, p. 167, pl. X, fig. S (radule).

Hab. — Ile Stewart (T. Kirk).

164. *R. Meesoni*, Suter, 1891.

Illustr. — *Trans. N. Zeal. Inst.*, vol. XXIII, pl. XVI, fig. 1, *a*, *b*.

Descript. — Suter, *op. cit.*, vol. XXIII, p. 84.

Anat. — *Op. cit.*, vol. XIII, p. 84, pl. XVI, fig. A. (radule).

Hab. — Ile du Sud : Wairoa Gorge ; Nelson (Meeson) ; Kenepuru Sound.

Genre XXVI. — PARYPHANTA, Albers, 1850.

Albers, *Heliceen*, 1re édit., p. 129, 1850.

165. *P. Busbyi*, Gray, sp., 1840.

Illustr. — Férussac, *Hist. Nat. Moll.*, pl. CII, fig. 19-20. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. LXXIII, fig. 380. —

Voy. Erebus et Terror, vol. II, *Moll.*, pl. I. fig. 4. — Chenu, *Man. Conch.*, fig. 3492. — H. et A. Adams, *Genera Moll.*, pl. CXXX, fig. 1.— *Conch. Cab.* (2), vol. I, part. 2, pl. CXXX, fig. 1-3. — Tryon, *Struct. Syst. Conch.*, vol. III, pl. XCIII, fig. 82. — Shuttleworth, *Notitiæ*, part. II, pl. I. — Reeve, *Conch. Syst.*, vol. II, pl. CLXIV, fig. 11. — Tryon, *Man. Conch.* (2), vol. I, pl. XXVI, fig. 23, 24. — *Proc. Linn. Soc. N. S. W.*, (2), vol. II, pl. XX, fig. 6 (*animal*).

Description. — *a. coquille.* — Gray, *Ann. Mag. N. H.* (1), vol. VI, p. 317. — *Dieffenbach's N. Zeal.*, p. 246. — Reeve, *Conch. Icon.*, *Helix*, sp. 380. — Pfeiffer, *Mon. Hel. viv.*, vol. I, p. 109. — *Revue Zool.*, vol. VII, p. 374. — *U. S. Expl, Exp.*, vol. XII, p. 215. — *Conch. Cab.* (2), vol. I, part. 2, p. 328. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 3. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 21.— *Trans. N. Zeal. Inst.*, vol. XVI, p. 207. — Tryon, *Man. Conch.* (2), vol. I, p. 127

b. animal. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 153.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 153, pl. IV, fig. A, L. (radule).

Hab. — Ile du Nord : Hokianga ; Baie des Iles ; Whangarei ; Little Barrier Island.

166. *P. urnula*, Pfeiffer, sp., 1855.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. CLXXXVII, fig. 1306. — Tryon, *Man. Conch.* (2), vol. I, pl. XXVI, fig. 14.

Descript. — Pfeiffer, *P. Z. S.*, 1854, p. 49 (1855). — Reeve, *Conch. Icon.*, *Helix*, sp., 1306. — Pfeiffer, *Mon. Hel. viv.*, vol. IV, p. 8. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 4. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 22. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 208. — Tryon, *Man. Conch.* (2), vol. I, p. 128.

Anat. — *Trans. N. Zeal. Inst.*, vol. XXIV, p. 286, pl. XX, fig. 1 (radule).

Hab. — Ile du Nord : Wellington.

167. *P. Hochstetteri*, Pfeiffer, sp., 1862.

Illustr. — *Hochstetter's N. Zeal.* (édit. anglaise), p. 169.

Descript. — Pfeiffer, *Malak. Blätter*, vol. VIII, p. 146. — Pfeiffer, *Mon. Hel. viv.*, vol. V, p. 48. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 3. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 22. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 207. — Tryon, *Man. Conch.* (2), vol. I, p. 127.

Hab. — Ile du Nord : Manawatu. — Ile du Sud : Collingwood (Hochstetter); Picton; Nelson; Westport.

168. *P. Gilliesi*, Smith, 1880.

Descript. — Smith, *Ann. Mag. N. H.* (5), vol. VI, p. 159. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 207. — Tryon, *Man. Conch.* (2), vol. I, p. 127.

Hab. — Ile du Sud : Nelson (Gillies); Collingwood.

Observ. — Cette espèce n'a pas encore été trouvée à l'état vivant.

169. *P. lignaria*, Hutton, 1888.

Descript. — Hutton, *Trans. N. Zeal. Inst.*, vol. XX, p. 43.

Hab. — Ile du Sud : Nelson (Gaze).

Observ. — Comme la précédente, cette espèce n'a pas encore été recueillie à l'état vivant.

Genre XXVII. — SCHIZOGLOSSA, Hedley, 1893.

(*Daudebardia*, Pfeiffer, 1862, *non* Hartmann, 1821).

Hedley, *Proc. Linn. Soc. N. S. W.* (2), vol. VII, p. 391.

170. *S. Novoseelandica*, Pfeiffer, sp., 1862.

Illustr. — *Proc. Linn. Soc. N. S. W.* (2), vol. VII, pl. IX fig. 1-3.

Descript. — Pfeiffer, *Malak. Blätter*, vol. VIII, p. 146.— Pfeiffer, *Man. Hel. viv.*, vol. V, p. 10. — Hector, *Cat. Land Moll. N. Zeal*, 1873, p. 2. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 12. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 208. — *Proc. Linn. Soc. N. S. W.* (2), vol. VII, p. 387-389.

Anat. — *Proc. Linn. Soc. N. S. W.* (2), vol. VII, p. 389-391, pl. IX, fig. 4 (org. génitaux); pl. X, fig. 6, 7, 9, 10 (organes digestifs, etc.); fig. 8 (œuf); fig. 11 (radule).

Hab. — Ile du Nord : Kakepuku (Hochstetter); Waikato; Wainuiomata ; Stratford.

Genre XXVIII. — Rhenea, Hutton, 1893.

(*Elœa*, Hutton, 1884, *non* Ziegler, 1833).

Hutton, *Proc. Linn. Soc. N. S. W.* (2), vol. VII, p. 631 (note marginale).

171. *R. coresia*, Gray, sp., 1850.

Illustr. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. CXXXII, fig. 807.— *Conch. Cab.* (2), vol. I, part. 2, pl. CLV, fig. 23-26.—Tryon, *Man. Conch.* (2), vol. I, pl. XXVI, fig. 15.

Descript. — Gray, *P. Z. S.*, 1849, p. 166 (1850). — *Ann. Mag. N. H.* (2), vol. VII, p. 66.— Reeve, *Conch. Icon.*, *Helix*, sp., 807.— Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 92.— *Conch. Cab.* (2), vol. I, part. II. p. 459. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 10. — Hutton, *Man. N. Zeal. Moll*, 1880, p. 24. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 207. — Tryon, *Man. Conch.* (2), vol. I, p. 130.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 172, pl. IX, fig. E (radule).

Hab. — Ile du Nord : Auckland (Greenwood); Wellington; Forty Mile Bush; Thames; Whangarei; Chaîne des Monts Hunua; Mont Pirongia.

172. *R. Jeffreysiana*, Pfeiffer, sp., 185~~4~~.3

Illustr. — Reeve, *Conch. Icon.*, vol. VII, *Helix*, pl. CXXX,

fig. 788. — Tryon. *Man. Conch.* (2), vol. I, pl. XXVI, fig. 26.

Descript. — Pfeiffer, *P. Z. S.*, 1852, p. 148 (1854). — Reeve, *Conch. Icon.*, *Helix*, sp., 788. — Pfeiffer, *Mon. Hel. viv.*, vol. III, p. 105. — Hector, *Cat. Land Moll. N. Zeal.*, 1873, p. 13. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 24. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 208. — Tryon, *Man. Conch.* (2), vol. I, p. 129.

Anat. — *Trans. N. Zeal. Inst.*, vol. XVI, p. 172, pl. XI, fig. F (radule).

Hab. — Ile du Nord : Auckland ; Thames ; Chaîne des Monts Hunua.

Classe PELECYPODA.

Fam. UNIONIDÆ.

Genre XXIX. — UNIO, Philipsson, 1788.

Philipsson, *Dissert. Hist. Nat. Nov. Test. Genera*, p. 16, 1788.

173. *U. Menziesi*, Gray, 1843.

Illustr. — Reeve, *Conch. Icon.*, vol. XVI, *Unio*, pl. XXIX, fig. 152. — *Hanley's Photographic Conchology*, pl. II, fig. 1. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. II, fig. A-C.

Descript. — Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 257. — Reeve, *Conch. Icon.*, *Unio*, sp., 152. — *Revue Zool.*, vol. VII, p. 449. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 160. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 148.

Anat. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 149, pl. II, fig. A-D.

Hab. — Ile du Nord. — Ile du Sud.

Var. β. *Aucklandica*, Gray, 1843.

Illustr. — Reeve, *Conch. Icon.*, vol. XVI, *Unio*, pl. XXIX, fig. 156.

Descript. — Gray, *Dieffenbach's N. Zeal.*, vol. II, p. 257. — *Revue Zool.*, vol. VII, p. 449. — Reeve, *Conch. Icon.*, *Unio*, sp., 156. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 161.

Hab. — Ile du Nord. — Ile du Sud.

Var. γ. Waikarensis, Colenso (*emend.*), 1845 (Waikarense).

Descript. — Colenso, *Tasmanian Journ. Nat. Sc.*, vol. II, part. 9, April 1845, p. 250 (note marginale). — *N. Zeal. Journ. Sc.*, vol. I, p. 170. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 169.

Hab. — Ile du Nord : Lac Waikare (Colenso).

Var. δ. Lutulenta, Gould, 1851.

Illustr. — *U. S. Expl. Exp.*, vol. XII, fig. 542 *a-c*.

Descript. — Gould, *Proc. Boston Soc. N. H.*, vol. III, p. 295. — *U. S. Expl. Exp.*, vol. XII, p. 428. — *Otia Conch.*, p. 88. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 161.

Hab. — Ile du Nord. — Ile du Sud.

Observ. — Les figures de Reeve *Conch. Icon.*, *Unio*, sp. 122-386, ne représentent pas cette variété.

Var. ε. Hochstetteri, Dunker, 1862.

Illustr. — Reeve, *Conch. Icon.*, vol. XVI, *Unio*, pl LXXXVI, fig. 463.

Descript. — Dunker, *Malak Blätter*, vol. VIII, p. 153. — Reeve, *Conch. Icon.*, *Unio*, sp. 463. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 161.

Hab. — Iles du Nord : Rivière Waikato (Hochstetter); Lac Taupo ; Lac Rotorua. — Ile du Sud.

Var. ζ. Rugata, Hutton, 1883.

Descript. — Hutton, *N. Zeal. Journ. Sc.*, vol. I, p. 478. — *Trans. N. Zeal. Inst.*. vol. XVI, p. 216.

Hab. — Ile du Nord : Kopuaranga River. — Ile du Sud : Lac Pearson (Enys).

174. *U. mutabilis*, Lea, 1860.

Syn. — ? *depressus*, Lamarck, 1818. — *depauperatus*, Hutton, 1883.

Illustr. — Lea, *Observ. Genus Unio*, vol. VII, pl. XXXVIII, fig. 127. — Reeve, *Conch. Icon.*, vol. XVI, *Unio*, pl. XXIV, fig. 112.

Descript. — Lea, *Proc. Acad. Nat. Sc. Philadelphia*, vol. III, p, 152. — *Observ. Genus Unio*, vol. VII, p. 66. — Reeve, *Conch. Icon.*, *Unio*, sp. 112. — *Linn. Soc. Journ. Zool.*, vol. XVI, p. 308. — Hutton, *N. Zeal. Journ. Sc.*, vol. I. p. 478. *Trans. N. Zeal. Inst.*, vol. XVI, p. 216.

Hab. — Ile du Nord : Lac Tapakuna.

175. *U. Zelebori*, Dunker, 1866.

Illustr. — *Reise Novara, Moll.*, pl. II, fig. 28.

Descript. — Dunker, *Abhandl. Zool. Bot. Gesellsch. Wien*, vol. XVI, p. 915. — *Reise Novara, Moll.*, p. 15. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 161.

Hab. — Ile du Sud.

Fam. CYRENIDÆ.

Genre XXX. — SPHÆRIUM, Scopoli, 1777.

Scopoli, *Intr. Hist. Nat.*, p. 397.

176. *S. Novæzelandiæ*, Deshayes, 1853.

Syn. — *Lenticula*, Dunker, 1862.

Illustr. — Reeve, *Conch. Icon.*, vol. XX, *Sphærium*, pl. IV, fig. 37.

Descript. — Deshayes. *Cat. Conchif. Brit. Mus.*, p. 272. — *P. Z. S.*, 1854, p. 342. — Reeve, *Conch. Icon.*, *Sphærium*, sp. 37. — Dunker, *Malak. Blätter*, vol. VIII, p. 153. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 154. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 149.

Hab. — Ile du Nord. — Ile du Sud.

Genre XXXI. — PISIDIUM, C. Pfeiffer, 1821.

C. Pfeiffer, *Nat. Deutsch. Moll.*, p. 17.

177. *P. Novæzelandiæ*, T. Prime, 1862.

Illustr. — *Ann. Lyceum Nat. Hist. New-York*, 1867, p. 91. — *Trans. N. Zeal. Inst.*, vol. XIV, pl. II, fig. F., *a*, *b*.

Descript. — T. Prime, *P. Z. S.*, 1862, p. 3. — *Ann. Lyceum Nat. Hist. New-York*, 1867, p. 91. — Hutton, *Man. N. Zeal. Moll.*, 1880, p. 155. — *Trans. N. Zeal. Inst.*, vol. XIV, p. 150.

Hab. — Ile du Nord. — Ile du Sud.

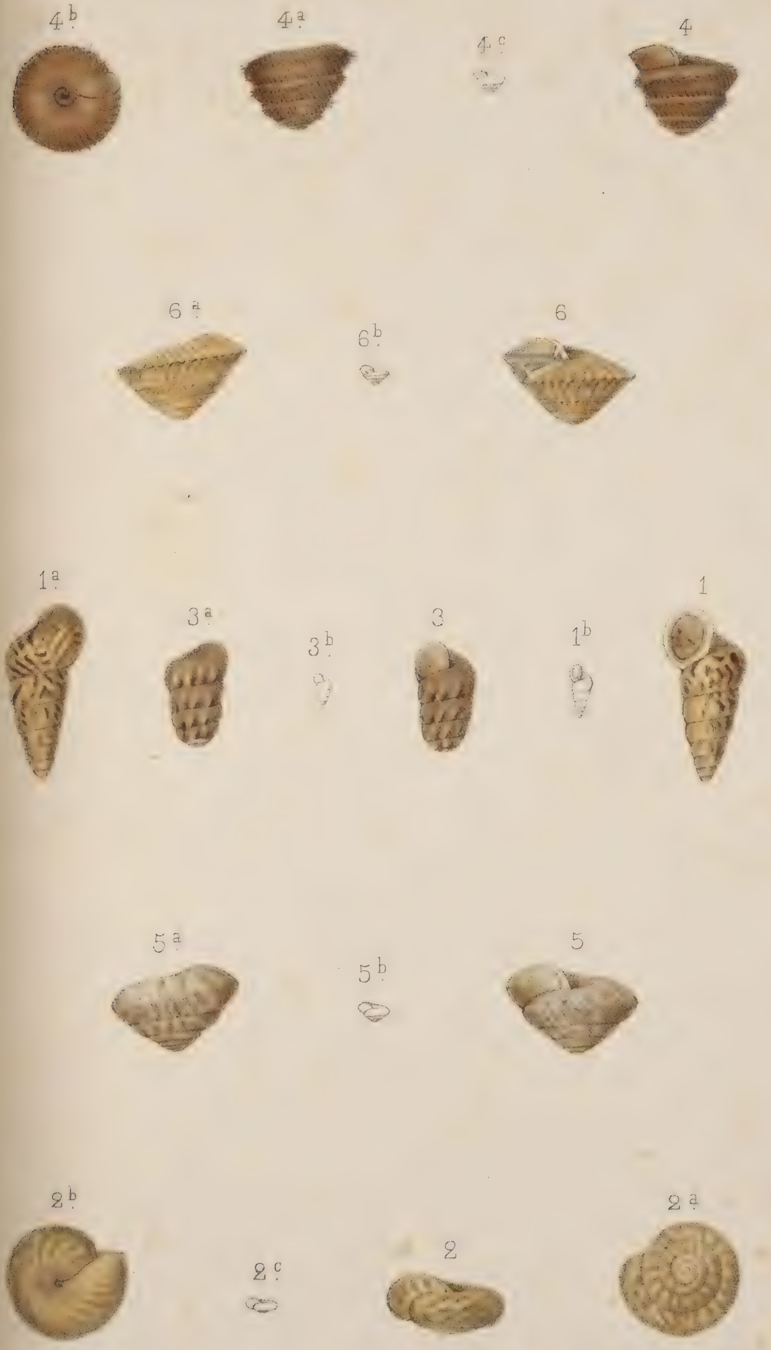
H. S.

EXPLICATION DE LA PLANCHE IX.

Fig. 1. — *Realia Egea*, Gray.
Fig. 2. — *Flammulina* (*Allodiscus*) *Tullia*, Gray.
Fig. 3. — *Endodonta* (*Phenacharopa*) *Novoseelandica*, Pfeiffer.
Fig. 4. — *Endodonta* (*Æschrodomus*) *stipulata*, Reeve.
Fig. 5. — *Laoma* (*Phrixgnathus*), *Haasti*, Hutton.
Fig. 6. — *Laoma marina*, Hutton.

Lille. — Imp. LE BIGOT frères.

Journal de Conchyliologie, 1893. Pl. IX.



Arnoul del.

Imp. Becquet fr. Paris.

Mollusques terrestres de la Nouvelle-Zélande.

ART. VIII.—*Further Contributions to the Knowledge of the Molluscan Fauna of New Zealand, with Descriptions of Eight new Species.*

By HENRY SUTER.

Communicated by Professor Hutton.

[*Read before the Philosophical Institute of Canterbury, 1st November, 1893.*]

Plates XIV.–XXI.

1. Large Form of Potamopyrgus cumingiana, Fischer.

Very large specimens of this shell were kindly presented to me by Professor F. W. Hutton. They were collected in Lake Te Anau, and are 8mm. high by 4mm. diameter. The whorls, of which there are eight, are very strongly and broadly angled round the upper part, and the last three show traces of the rubbed-off spines, of which there were about sixteen on the body-whorl.

This species is very limited in its distribution on the South Island. I have much smaller specimens from Pelorus River and Collingwood only.

2. Latia and its Varieties.

Four species of this genus peculiar to New Zealand have been described—viz., *L. neritoides*, Gray (1849); *L. lateralis*, Gould (1852); *L. petitiana*, Fischer (1856); and *L. gassiesiana*, Fischer (1856). Mr. Charles Hedley kindly presented me with etchings of these shells, and I am therefore now in a better position to judge whether they are all good species or only varieties of *L. neritoides*, Gray, the first described of the lot. Gould himself says that his *L. lateralis* might probably be the same as *L. neritoides*, and Professor Hutton (Proc. Linn. Soc. N.S.W., vol. vii., 1883) holds that these two form only one species. To judge, however, from the figures, I am of opinion that *L. lateralis* and *L. gassiesiana* must be considered as varieties of *L. neritoides*, and very likely also *L. petitiana*, though the figure does not show a very marked difference from *L. neritoides*.

3. Ancylus dohrnianus, Clessin (1882).

The description and figures of this shell, which is said to come from New Zealand, were published in Conch. Cab. (2), Bd. I., Abth. vi., p. 54; pl. viii., fig. 8 (two). It resembles somewhat *A. irvinæ*, Petterd, from Tasmania, but the apex is quite different. Neither Professor Hutton nor myself have any knowledge of such an *Ancylus* ever having been found in this colony, and it may therefore help to swell the already long list of shells erroneously ascribed to New Zealand.

4. Gundlachia, sp. Plate XIV., figs. 1–5.

About two years ago I found in the River Avon, below the outflow of the Horseshoe Lake, a minute ancyliform shell, which I could not separate from *Ancylus woodsii*, Johnston (figs. 1, 2), from Tasmania. I then found only empty shells, but further collecting furnished a good number of them alive. On examining the shells I found, to my great surprise, that in several of them the base was more or less closed by a septum, as it is found in the Tasmanian *Gundlachia* (fig. 3). On consulting Johnston's papers on the Tasmanian fresh-water shells I found the statement that his *Ancylus woodsii* has "the animal and teeth almost similar to *Gundlachia petterdi*" (!), and that in the young state the shell of *Gundlachia* resembles the common *Ancylus*. I compared the dentition of our shell with that of a *Gundlachia* from Ohio, and there was almost no difference; therefore the shell from the River Avon must be considered as a *Gundlachia*. Figs. 4 and 5 show the form of jaw and teeth. The shell, on attaining its full development, will, no doubt, resemble the Tasmanian *G. petterdi*, but I have not yet succeeded in finding it. According to my own observation, and information received from Tasmania, *Gundlachia* seems to attain but seldom its full development, but grows and dies mostly in its ancyliform shell, without even attempting to form a septum. This is shown by the fact that here, as well as in Tasmania, *Ancylus woodsii* is abundant, and *Gundlachia* is rare in the same locality.

Professor Hutton told me that this *Gundlachia* in the River Avon might possibly have been introduced from Tasmania on aquatic plants used for packing trout-ova. This may be, but I rather doubt it, for the following reason: I have not found yet the shell in question from the outflow of Horseshoe Lake *upwards* to the fish-hatching establishment, a distance of several miles, but only *in* that outflow and *downwards* from its disemboguement in the River Avon. Very likely it is living in that lake, and was brought down to the river when the canal was cleared from weeds. The lake is not easy of access, and I have not had an opportunity of exploring it. The question whether it is an introduced form or not can only be settled with certainty when it is found in a locality where the above-mentioned mode of introduction is out of question.

The fact of *Gundlachia* occurring in New Zealand would not be astonishing at all, for we have, besides some genera of fresh-water shells, of the land-shells the sections *Flammulina*, *Gerontia*, *Phacussa*, *Allodiscus*, *Thalassohelix*, *Phrixgnathus*,

&c., in common with Tasmania, as shown by the writer quite recently.

5. Limnæa tenisoni, Clessin, sp. em. (*tennissoni*), 1886,

Was described and figured by its author in Conch. Cab. (2), i., Abth. 17, p. 371, pl. lii., fig. 11. Clessin's reason for placing this shell in the genus *Physa* I do not understand, for description and figure clearly show that it is a *Limnæa;* and I do not think that Clessin is unable to separate the two genera. Clessin's species seems to differ not very much from *Limnæa alfredi,* described and figured by the writer (Trans. N.Z. Inst., vol. xxii., p. 229, pl. xv., figs. 17, 17*a*), and I propose to make *L. alfredi* a variety of *L. tenisoni,* the latter having priority of publication.

Mr. Clessin and other European authors would greatly oblige the writer by sending him a copy, or at least a note, whenever they publish descriptions of new species of terrestrial and fresh-water shells from New Zealand; and they may expect reciprocity.

6. On some Species of Bullinus, Adanson, em. (*Bulinus*).

Bullinus novæ-seelandiæ, Clessin, sp. 1886, is another addition of Clessin's to our fauna, though the specific name is preoccupied by Sowerby. According to his description and figure (Conch. Cab. (2) i., Abth. 17, p. 372, pl. liv., fig. 7), it is, in my opinion, identical with *B. variabilis,* Gray. Most species of our *Bullinus* are so variable that the creation of new species is a very easy matter; but it is highly deplorable if this is done, as it seems to have been the case in several instances, based on a few specimens, and from one locality only, as there is no possibility to estimate the range of variability of the species.

By comparing many specimens, and from different localities, I came to the conclusion that *B. tabulatus,* Gould, sp. 1848, and *B. moesta,* H. Adams, sp. 1861, are one and the same species. The distinction of species by the keeling of the whorls is quite untenable, and every gradation of it may be observed.

Two species of *Bullinus* were brought to light by Mr. Charles Hedley—viz., *B. coromandelicus,* Dunker, sp. 1862, and *B. hochstetteri,* Dunker, sp. 1862, which were omitted from former lists of our mollusca. I have but little doubt that both must be considered as identical with *B. tabulatus,* Gould.

7. Athoracophorus, Gould, 1852. Plate XIV., figs. 6–9, and Plate XV., figs. 10, 11.

In the "Enumeration of the *Janellidæ,*" published by Mr. Charles Hedley in the last volume of our Transactions, the generic name of *Janella*, Gray, 1850, was used, and arguments given for doing so. As *Janella*, Grateloup, is identical with *Niso*, Risso, the name can stand, but I think, with Pilsbry, that it is far better to reject any name which has been previously proposed in a generic sense, whether the first usage is valid or not. Mr. H. A. Pilsbry, in a letter to Mr. Charles Hedley, kindly communicated to me, gives the following weighty reasons: "We never know when a name supposed to be a synonym is going to be revived for a section, sub-genus or genus, on account of characters formerly overlooked; and when the name happens to be in a little-known group, unfamiliar to us—Diptera for example—who is to tell whether a generic name is really a synonym or not?" I, therefore, use now the name proposed by Gould.

A. papillatus, Hutton. As this species has only been figured by Simroth (*A. verrucosus*, Von Mart., Nova Acta, Bd. 54, pl. iv., fig. 11), and I had an opportunity of getting good specimens near Christchurch, I now give correct drawings of the animal, jaw and teeth of the radula (Plates XIV. and XV., figs. 6–11). I compared carefully Simroth's description of the animal and anatomy of *A. verrucosus*, Von Martens, 1889, with typical specimens of *A. papillatus*, Hutton, and the details of its anatomy published by Professor Hutton, and am convinced that both are one and the same species.

The var. *nigricans* and *fasciata*, Von Martens, I never observed in adult specimens of *A. papillatus*. Young specimens of this species I found always mixed of the typical form and var. *fasciatus*, whilst in adult specimens the colour-markings of the latter had fully disappeared, but they showed somewhat different colours. Some were of a yellowish-brown, but others were dark olive, the latter very likely corresponding with the var. *fasciatus* in the young. The variety *nigricans* is rare.

It seems to me that too much importance has been attributed to the colour and colour-markings of *Athoracophorus*, and this by scientists who have never seen the living animals, but only specimens more or less badly preserved in alcohol, which deteriorates the colour and form of the animals considerably. I have collected hundreds of *Athoracophorus* on both Islands of this colony, and can testify to the great variability of colour and colour-markings in the species.

A. marmoreus, Hutton, is no doubt the same as *A. marmoratus*, Von Martens, described by Dr. Simroth. The description and figure of the animal given by Simroth corresponds very well with Hutton's species, and in the main features of the genital organs, according to the publications of both scientists, they also seem to me to agree. I had no specimen of *A. marmoratus* at my disposal, as was the case with

A. papillatus, to compare its anatomy with all the details given by Dr. Simroth.

According to Simroth's able investigations (Nova Acta, Bd. 54, Die Nacktschnecken Neu Seelands, p. 71, &c.), and his utterances when speaking on the systematic position of the *Athoracophoridæ*, it will be necessary to class *A. papillatus* and *A. marmoreus* in different sub-genera. He says distinctly that the most striking differences between the two species in form and cross-section of the animals and genital organs would almost justify the creation of two genera.

The sub-genus *Pseudaneitea* has been proposed by T. D. A. Cockerell (P. Z.S., 1891, p. 217) for slugs of New Zealand and the Auckland Islands, resembling *Athoracophorus*, but showing a decided tendency towards the formation of a "mantle area" like that of *Aneitea*. The type and only species is *A. papillatus*, Hutton, sp. 1879 (=*verrucosus*, Von Martens, 1889). As sub-genus for *A. marmoreus*, Hutton, sp. 1879 (=*marmoratus*, Von Martens, 1889), must of course be taken *Konophora*, the former generic name proposed by Professor Hutton in 1879 (Trans. N.Z. Inst., vol. xi., p. 332).

Neojanella dubia, Cockerell (*l.c.*), is nothing else but *A. bitentaculatus*, Quoy and Gaimard. I could show Mr. Cockerell alcohol specimens of this slug which are lacking the "mantle area" and dorsal groove, yet they were distinctly visible when the animals were alive; and also specimens of *A. bitentaculatus*, with the back pale-yellowish, marbled all over with black or dark-bluish grey. The specimen described by Cockerell is a very large one (length 53mm.), and I know of no other locality than the south side of Cook Strait where *A. bitentaculatus* attains such a large size.

8. **Bulimus antipodarum**, Gray, 1843,

Is said to have been found at Kaitaia by Dieffenbach, and recent collectors (Gillies and T. W. Kirk) are reported as having found this shell at different places in the northern part of the Province of Auckland. Opinions are divided as to the validity of the species; some consider it as the young of *Placostylus bovinus*, others take it as a good species. I therefore thought it well worth to investigate the question, and wish now to say a few words on the subject. Looking at the figure of *B. antipodarum* given by Smith (Voy. "Erebus" and "Terror," ii., Moll., pl. i., fig. 5), and reading Gray's description (Dieffenbach's New Zealand, ii., p. 247), one must come to the conclusion that this shell cannot belong to the genus *Placostylus*, the aperture being quite different, but it agrees in every respect with *Cochlostyla*. This opinion was evidently held also by the author of the species, for he says that it is allied to *Bulimus fulgetrum*, Broderip, from the Philippine

Islands, which is a true *Cochlostyla*. Reading Gillies's remarks on *B. antipodarum* (Trans. N.Z. Inst., vol. i., p. 60) one gets the impression that he mistook young specimens of *P. bovinus* for Gray's species, and in this he was followed by others. Professor Hutton kindly allowed me to examine specimens in the Canterbury Museum, labelled *P. antipodarum*, and they proved to be young specimens of *P. bovinus*, but were in no way related to *B. antipodarum*. I am now of opinion that the shell found by Dieffenbach, and described by Gray as *B. antipodarum*, has very likely never been found again in New Zealand, and is in reality *Cochlostyla fulgetrum*, Broderip, introduced accidentally from the Philippine Islands. This suggestion is supported by the fact that *Cochlostyla daphnis*, Broderip, from those islands, has been found at Picton (Trans. N.Z. Inst., xxiv., p. 280).

9. Amphidoxa and Flammulina.

Albers founded the section *Amphidoxa* to receive two species —*A. marmorella*, Pf., and *A. helicophantoides*, Pf., from Juan Fernandez and Chili. Professor Hutton, in his Revision of the Land-shells of New Zealand, the foundation-stone of our present knowledge of these molluscs, classed nine of our shells under *Amphidoxa*, Albers, and gave descriptions and figures of the dentition of eight of them. The diagnosis given by Albers, and the figures of the species from Juan Fernandez, seem to fully justify Professor Hutton's view in adopting *Amphidoxa* for our shells, more especially for *A. crebriflammis*, Pf., *A. zebra*, Le Guillou, and *A. costulata*, Hutton. Professor Hutton, and the writer, never had an opportunity of comparing New Zealand specimens with *Amphidoxa* specimens from Juan Fernandez, and the dentition of the latter is still unknown.

Last year Mr. H. A. Pilsbry published "Observations on the *Helices* of New Zealand" (Nautilus, vi., Sept., 1892, No. 5, p. 54, &c.), which, coming from such an able conchologist, were greatly appreciated by scientists in Australasia. With regard to *Amphidoxa*, he says (*l.c.*, p. 56), "The true *Amphidoxa* has not been found elsewhere than upon the island Juan Fernandez and the neighbouring South American coast. I have compared specimens with the New Zealand shells, and find that there is not the slightest ground for supposing them congeneric." After such a verdict from a competent authority, Mr. Hedley and the writer, in the "Reference List of the Land and Fresh-water Mollusca of New Zealand" (Proc. Linn. Soc. N.S.W., vii., (2), p. 643), adopted the name *Flammulina*, proposed by Von Martens (Critical List of New Zealand Moll., 1873, p. 12), for the New Zealand species formerly included in *Amphidoxa*,—*F. zebra*, Le Guillou, being the type.

A short time ago I examined the dentition of thirty-two land-shells from Tasmania, and found them mostly to belong to the sections *Flammulina*, *Gerontia*, *Phacussa*, *Allodiscus*, *Thalassohelix*, and *Phrixgnathus*, hitherto known from New Zealand only. Afterwards I had an opportunity of examining the dentition of a land-shell from South Africa, a typical form of the section *Pella*, Albers, which, to my great surprise, showed the very same peculiarities in jaw and radula as are characteristic of our genus *Flammulina*. All this leads me to think that *Flammulina* and allied forms belong to the antarctic fauna, which at a very remote period may have lived on the supposed antarctic continent, and of which remnants are now found in New Zealand, Tasmania, South Africa, and—why not South America also?

I hope that some day the dentition of the *Amphidoxa* species from Juan Fernandez will be made known, and I should not be astonished to see them (and perhaps *Stephanoda* also) nearly related to those forms I now include in the genus *Flammulina*.

10. **Thalassohelix igniflua,** Reeve, and **Th. obnubila,** Reeve.

Professor Hutton was the first to recognise the absolute identity of the two species (Trans. N. Z. Inst., vol. xvi., p. 203). In the "Reference List" (*l.c.*, p. 636), by Mr. Hedley and myself, however, my friend made *Th. obnubila* a variety of *Th. igniflua*. This difference of opinion caused me to look once more at the specimens in my collection, and to compare them carefully with the diagnoses of the two species. It was easy to pick out a few specimens corresponding with each of the species mentioned, extreme forms; but, besides these, there were many intermediate forms, and I again came to the same conclusion as Professor Hutton, that they are all one and the same species, and that there is not even a possibility of making out a constant variety. *Th. igniflua*, the large, brighter, and smoother form, is found in open country, amongst shrubs, tussocks, &c.; whilst the smaller, dark-coloured, and strongly striated and plaited *Th. obnubila* occurs in the dark native bush. The differences in the shell seem to be due to the influence of the habitat only. The dentition is the same in both.

An example of similar variability is *Thalassohelix fordei*, Brazier, of Tasmania, of which no less than about *twelve* species have been made.

11. **Endodonta,** Albers. Plate XV., figs. 12–14.

The first New Zealand species of this genus made known to science is *E. cryptobidens*, Sut. (Trans. N.Z. Inst., vol.

xxiii., p. 89). Since then three more species have been recognised, all of which are species described long ago under the generic name of Patula, viz.:—

(*a*.) *E. varicosa*, Pfeiffer, sp. 1854 (fig. 12). I sent specimens of *E. timandra*, Hutton, to Mr. Edgar A. Smith, of the British Museum, to compare them with Pfeiffer's type of *H. varicosa*. Mr. Smith most obligingly informed me that they were not identical, but that Pfeiffer's *Helix varicosa* was undoubtedly also an *Endodonta*, having *one* tooth (overlooked by Pfeiffer and Reeve) situated on the body-whorl. It is a slender lamella, and might easily be overlooked.

(*b*.) *E. timandra*, Hutton, sp. 1883 (fig. 13), is very much like the foregoing, but is smaller, more openly umbilicated, has more riblets, and the armature of the mouth is different, there being *three* lamellæ, one on the body-whorl, one at the base of the columella margin, and one on the outer lip.

(*c*.) *E. jessica*, Hutton, sp. 1883 (fig. 14). On examining this shell, which is very nearly allied to the foregoing two species, I found it to have *six* teeth in the aperture, of which two are situated on the body-whorl, one at the base of the inner lip, and three on the outer lip.

According to my present knowledge, *E. timandra* is confined to the North Island, the other three to the South Island.

12. Charopa coma, Gray, var. *globosa*, Suter, 1892.

This variety is the same as var. *beta*, Pfeiffer, 1853; but, as varieties are to be named in the same way as species, and there exists already a *Charopa beta*, Pf. (= *barbatula*, Reeve), Pfeiffer's name can hardly stand. This variety is not identical with *Ch. lucetta*, Hutt. (= *stokesi*, Smith), as supposed by several conchologists.

13. Charopa caput-spinulæ, Reeve, sp. 1852. Plate XVI., figs. 15, 16 (= *epsilon*, Pfeiffer).

The dentition of this species has never been published before, and, as the radula is a typical form of *Charopa*, I give here a figure of it and of two jaws, showing the variability of the latter in the same species. The jaw is membraneous, and distinctly striated, not plaited. The radula has the formula 12—4—1—4—12. It is hardly necessary to describe it, the characters being mainly the same as delineated in former papers by Professor Hutton and myself for *Charopa*.

14. Tesseraria* novoseelandica, Pfeiffer, sp. 1854. Plate XVI., fig. 17.

The true systematic position of this little pupiform mollusc

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* *Phenacharopa*, Pilsbry, 1893 (not *Tesseraria*, Haeckel, 1879 or 1880); *vide* Man. Conch. (2), vol. ix., p. 29.

has long been misapprehended, it generally being considered to be a pupa. It was reserved to Dr. Von Moellendorff, in Manila, to point out its true nature, and I am glad to say that Mr. Pilsbry agrees with the opinion of Dr. Von Moellendorff, and the writer. Having sent a small collection of New Zealand shells to Manila, Dr. Von Moellendorff wrote to me, under date 20th February, 1892: "What do you think of *Pupa novoseelandica?* Boettger has elevated it to the type of the sub-genus *Tesseraria*. I take it to be a Patulide, standing nearest to *Thera*. Is the animal already known?" I never fell in with a view more readily than with this. I had just then published the description and figures of the dentition of this species (Trans. N.Z. Inst., vol. xxiv., p. 300, pl. xxiii., figs. 53, 54), and pointed out that the radula of this *Pupa* differs considerably from all the others of the genus I have seen. I wrote to Dr. Von Moellendorff that I fully agreed with him, and, sending him a reprint of my paper, which contains also the dentition of the two species of *Thera*, was able to show him that his view was also borne out by the dentition. With his next letter he kindly sent me a modified diagnosis of Boettger's *Tesseraria*, of which I give here a copy:—

"*Tesseraria*, Boettger, sec. *Charopæ*.

"T. pupæformis, fere exacte cylindrata, apice obtuso, subrotundato, costulata, rufo-fusca, maculis stramineis præcipue ad suturam tesselata.

"Radula et maxilla persimilis illis *Theræ* stipulatæ et barbatulæ, Reeve.

"Type: *Endodonta* (*Charopa*) *novoseelandica*, Pfeiffer, 1854."

Animal (fig. 17).—When living in the Forty-mile Bush I made a sketch and short description of the animal, which I think may be of interest now.

The animal is nearly white, the eye-bearers greyish-black, clavate, long (about 3mm.), the tentacles white, short (about ½mm.), rounded in front. Mantle central; neck with two blackish stripes running backwards from the eye-bearers; tail sharp above, slightly tapering, no caudal pore. There is a distinct pedal line, to which run down the whole length of the foot shallow diagonal grooves. Sole white, with a slightly darker median disc, smooth all over. Length of body 9mm., breadth of sole 1¼mm.

15. Laoma leimonias, Gray, 1850. Plates XVI., fig. 18, and XVII., fig. 19.

No figure of the *dentition* of this mollusc has ever been published, as it seems rather difficult to get a shell with the animal. As it is the type of *Laoma*, Gray, it is most important that we should get acquainted with its dentition, and I therefore give here the figures of the jaw and part of radula.

The jaw is composed of twenty-five separate strongly-papillate plaits. The radula has the formula 25—1—25; the central tooth is minute, unicuspid, the laterals and marginals bicuspid. For details in the dentition of this and the following three species of *Phrixgnathus* I refer to former publications by Professor Hutton and myself.

16. Phrixgnathus pumilus, Hutton, sp. 1883. Plate XVII., figs. 20, 21.

The *jaw* of this species was not seen by Professor Hutton when he examined the dentition. It is distinctly papillate, the plaits are narrow towards the ends, very broad in the middle; but this may differ with the individual.

The central and lateral *teeth* are just as figured by Professor Hutton (Trans. N.Z. Inst., xvi., pl. ix., fig. Q). The marginals, which are figured here, are similar to the laterals, bicuspid, but shorter, quadrate.

17. Phrixgnathus microreticulatus, Suter, sp. 1890. Plate XVII., figs. 22, 23.

This species was described by the writer as *Hyalina microret.*, but on examining the jaw and radula I saw that it belongs to Hutton's *Phrixgnathus.*

The *jaw* is formed of about eighteen separate slightly-papillate plaits; the *radula* has the formula 27—1—27, the rachidian tooth unicuspid, the laterals and marginals bicuspid, the last exceptionally tricuspid.

18. Phrixgnathus allochroidus, var. **lateumbilicatus,** Suter, sp. 1890. Plate XVIII., figs. 24, 25.

This is another of my supposed *Hyalinæ*, which on examining the dentition turned out to be a *Phrixgnathus; jaw* with about twenty-one separate papillate plaits; formula of *radula* 14—1—14; central tooth tricuspid, with a median cutting-point, laterals and marginals bicuspid.

19. Ariophanta* novaræ, Pfeiffer, sp. 1862. Plate XVIII., figs. 26, 27.

As mentioned in my list of the introduced land and fresh-water mollusca of New Zealand (Trans. N.Z. Inst., vol. xxiv., p. 280), I suspected Mr. Musson's *Zonitoides nitida,* Müller, from Lake St. John, Auckland, to be not this species, but Pfeiffer's *Hyalina novaræ.* At my request Mr. Musson kindly sent me a number of shells and animals. I at once saw that

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* *Ariophanta,* Des Moulins, 1829 (*Nanina,* Gray, 1834; not Risso, 1826).

it could not be *Z. nitida*, but the specimens correspond with Pfeiffer's diagnosis of *H. novaræ*, with the only difference that some of Musson's specimens have ½–1 volutions more, and are therefore larger than the examples collected by Hochstetter. On examining the animal and dentition I saw that it is not a *Flammulina*, as first supposed, but an *Ariophanta*, the only species of this genus known to me to occur in New Zealand. It may therefore be of interest to have the dentition described and figured.

Jaw (fig. 26) membranaceous, smooth, upper margin arched, lower margin almost straight, with an indistinct median projection, ends tapering, faintly longitudinally and vertically striated.

Radula (fig. 27) tongue-shaped, formula 42—1—42, of which 10 to 12 are laterals; transverse rows of teeth straight. Central tooth long and narrow, with one long reflection, and a short, stout cutting-point, extending a little over the next row of teeth. Laterals broader, unicuspid, with a broad, blunt cutting-point of the same length as the central. A large number of intermediate teeth follow; they are oblique, with a bicuspid reflection, and one stout, oval cutting-point. Marginals sinuate, bicuspid.

20. Otoconcha dimidiata, Pfeiffer, sp. 1854. Plate XVIII., fig. 28, and Plate XIX., fig. 29.

Some time ago I found a single specimen of this curious mollusc at Port Hills, Lyttelton, the radula of which differs slightly from that described and figured by Professor Hutton (Trans. N.Z. Inst., vol. xvi., pl. ix., fig. Y). The specimen was rather a young one.

Jaw (fig. 28). It has hitherto been said that the jaw of *Otoconcha* is ribbed, and at first sight it would seem to be so. I have, however, quite a different opinion. The outlines of the jaw figured are decidedly those of an oxygnath jaw, which supposition is supported by the distinct longitudinal striation, which is very often seen in the jaw of the *Limacidæ*. The most irregular denticulation of the cutting-margin points to the fact that this jaw cannot be considered as ribbed, but as *channelled* by the action of the exceedingly strong cutting-points of the radula.

I therefore describe the jaw of *Otoconcha* as *oxygnath*, smooth, longitudinally striated, with a strong median projection inferiorly, *irregularly channelled*, the channels increasing in depth towards the cutting-margin, which is deeply and irregularly denticulated. Ends blunt.

The jaws of old animals represent only a narrow ledge with blunt denticulations on the inferior edge; perfectly worn out by the action of the teeth.

The *radula* (fig. 29) wants no explanation. The formula is 26—1—26, with five distinct lateral teeth.

I am still of opinion that *O. dimidiata* belongs to the genus *Vitrinoidea*, Semper, but I think it to be safer to retain the generic name proposed by Professor Hutton until I have been able to compare dentition and genital organs of our mollusc with those of a *Vitrinoidea* from the Philippine Islands. But the animal perfectly agrees with Semper's diagnosis of the genus; and there is one important fact which should be taken into consideration: *O. dimidiata*, when resting, brings its tail forwards beside the body and head, a position I have never seen taken up by any other mollusc. The figure of *Vitrinoidea albajensis* given by Semper (Philippinen, vol. iiii., Taf. viii., fig. 2) shows a very similar position of the animal, and it seems that Semper has also been struck by its peculiarity. The figures of the teeth given by Semper are quite insufficient for comparison.

New Species and Varieties.

1. Lagochilus fasciatum, n. sp. Plate XIX., figs. 30, 31.

Shell small, turbinate, subperforated, rufous, not shining, rather thin, with close membranaceous, white, slightly sinuated radiate plaits, about 11 or 12 per millimetre. They are crossed by numerous distinct spiral striæ. Spire conical, apex rather blunt, smooth. Whorls 6, rounded, the first five slowly and regularly increasing, the last rapidly growing in size. Periphery rounded. There is a distinct horny band below the periphery on the last whorl, as is sometimes seen also in *L. pallidum*, Hutt. Suture impressed. The notch in the peristome is slight, but quite evident at the point where the upper margin meets the whorl. Aperture almost circular, diagonal; peristome simple, straight, strengthened inside by a callous ring, the callosity extending over the body-whorl between the convergent margins. Umbilicus very narrow, previous, partly covered. Base rounded.

Operculum not seen.

Animal unknown.

Diameter, 2mm.; height, 2½mm.

Hab. Near Manaia, Waimate Plains, North Island, where it was collected by Mr. R. Murdoch, of Wanganui.

Note.—This species is near *L. hedleyi*, mihi, but may be distinguished from it by the more elevated spire, the less rounded whorls, the more numerous and equidistant plaits, the very distinct spiral striation, and the horny band on the last whorl.

It is smaller than *L. cytora*, the spiral striæ are much closer, and in the latter the radiate plaits are provided with a hair at the point where they cross the spiral striæ.

Genus Flammulina, Suter.

2. Flammulina (Calymna) pilsbryi, n. sp. Plate XIX., figs. 32–32*b*.

Shell minute, discoidal, umbilicated, horny with radiate brown streaks, which usually form zigzag lines at the periphery, flowing more or less together. The colour-markings are very variable, sometimes there are only a few broad brown streaks on the upper side. Silky, very thin and semi-transparent; very closely and finely radiately striated, the striæ slightly arcuated and directed backwards, about 20 per millimetre, reticulated in the interstices. Spire flat, embryonic whorl spirally striated. Whorls 4, the last rapidly increasing, slightly rounded, the last not descending in front; suture not deep. Periphery rounded. Aperture slightly oblique, rounded, very little excavated by the body-whorl; peristome acute, straight, columella lip not expanded, margins approximating. Umbilicus conical, almost one-third of the diameter. Base rounded.

Diameter, greatest 2¾mm., least 2⅓mm.; height, 1mm.

Hab. North Island: Forty-mile Bush (H. S.), Howick (Captain T. Broun), Waimarama (A. Hamilton). South Island: Hooker Valley, Riccarton Bush (H. S.), Capleston (Cavell).

Note.—Named in honour of Mr. H. A. Pilsbry, of Philadelphia, who has done so much to clear up the systematic position of our *Helicidæ*.

This shell is near *F. costulata*, Hutt., but is considerably smaller, much broader umbilicated, more depressed, and somewhat narrower striated.

Jaw membranaceous, arcuate, vertically plaited, the cutting-margin slightly denticulated, ends rounded, somewhat tapering.

Radula tongue-shaped, formed of about 100 straight transverse rows of teeth, 7—4—1—4—7.

Central and lateral teeth tricuspid, marginals broader than long, tridentate, the median tooth being the largest.

It is the typical dentition of *Flammulina*, as several times described and figured by Professor Hutton and myself, and figures are therefore hardly wanted.

3. Pyrrha subincarnata, n. sp. Plate XIX., fig. 33, and Plate XX., figs. 34 and 35.

Shell (figs. 33–33*b*) globosely depressed, subperforated, shining at the base, from horny to flesh-colour, young specimens horny all over, adult ones either reddish round the apex and the mouth or the flesh-colour may extend over the whole shell; rather thin, transparent; somewhat irregularly, closely, radiately striated, about ten riblets per millimetre, the interstices with fine growth-lines, but not reticulated. Spire depressed, conoidal; embryonic whorl slightly radiately striated; periphery angulated. Whorls 5, slowly and regularly increasing, flatly rounded, suture impressed, last whorl not descending in front. Aperture transverse, oblique, ovately-lunar. Peristome straight, thickened with a pinkish callosity, which unites the very slightly converging margins on the body-whorl; columella lip strongly callous at its upper end, slightly reflexed. Umbilicus perfectly closed by the columellar callosity in adult specimens; young forms are narrowly perforated or subperforated. Base rounded.

Diameter, greatest 8½mm., least 7½mm.; height, 5½mm.

Hab. North Island: Toko, near Stratford (R. Murdoch).

Note.—This pretty little shell somewhat resembles the larger *Fruticicola incarnata* of Europe. It is smaller and more depressed than *P. cressida*, Hutton, less fragile, differently coloured, not reticulated between the riblets, and has a callous peristome.

Jaw (fig. 34) slightly arcuate, with an indistinct median projection inferiorly, with numerous vertical indistinct folds, ends rounded.

Radula (fig. 35) tongue-shaped, transverse rows of teeth straight, formula 29—1—29, of which 8 may be taken as laterals. Rhachidian tooth longer than broad, tricuspid, median cusp reaching to the end of the base and its broad, short, cutting-point over the next row of teeth; side-cusps with a small cutting-point on each. Laterals similar to the central; the marginal teeth are tridentate, with the base short and broad, median tooth long and stout, the others small; outer marginals minute, tri- and bi-dentate.

4. **Phenacohelix pilula,** Reeve, var. **unicolor,** n. v.

Shell the same as in the species, but without any markings, uniformly light-brown. Dentition unknown.

Hab. North Island: Taupiri Mount (A. T. Urquhart).

5. **Allodiscus smithi,** n. sp. Plate XX., figs. 36–36*b*.

Shell minute, discoidal, perforated, silky, pale-yellow with zigzag streaks of rufous; thin, diaphanous, closely ribbed, about twenty riblets per millimetre; they are slightly arched and somewhat sinuate at the periphery; interstices beautifully reticulated. Spire flat; embryonic whorl spirally striated; periphery rounded. Whorls 4, the first three slowly, the last more rapidly increasing, rounded; suture impressed; periphery rounded. Aperture oblique, lunar; peristome straight, acute, margins distant, but little converging, columella margin slightly reflexed above. Umbilicus previous, very narrow. Base rounded.

To judge from the number of whorls, the specimens are not adult.

Diameter, greatest 2¼mm., least 2mm.; height, 1¼mm.

Hab. South Island: Mount Somers.

I owe my specimens to the kindness of Mr. W. W. Smith, of Ashburton, in whose honour the shell is named. This shell is very distinct from all the other known species of *Allodiscus*.

Jaw horse-shoe shaped, composed of about twenty-eight vertical narrow plaits, indenting both margins; a slight median projection inferiorly; ends blunt.

Radula tongue-shaped, the transverse straight rows of teeth consisting of 15—1—15, of which four are laterals. Central tooth rectangular, longer than broad, tricuspid, the median cusp with its short cutting-point extending to the posterior end of the base; side-cusps short, sinuated, one minute cutting-point on each. Laterals broader than the rhachidian, tricuspid, but the inner cusp rudimentary and without cutting-point, median cusp with a short cutting-point overlapping a little the next row of teeth, outer cusp and cutting-point somewhat larger than in the central tooth. Marginals much broader than long, with a tridentate cutting-point and sometimes a minute denticle on the outer side of the base.

6. **Allodiscus rusticus**, n. sp. Plate XX., figs. 37–37*b*.

Shell small, subdiscoidal, perforated, not shining, pale-horny, thin, semi-transparent, with close radiate ribs, about eight per millimetre, slightly sinuated and somewhat directed backwards; interstices with fine growth-lines, not reticulated. Spire almost flat, embryonic whorl smooth; periphery rounded. Whorls 5, slowly and regularly increasing, flatly rounded; suture impressed, last whorl not descending in front. Aperture oblique, lunar; peristome simple, acute, columella margin slowly ascending, callous, not reflexed. Umbilicus very narrow, open, previous. Base rounded.

Animal unknown.

Diameter, greatest 4½mm., least 4mm.; height, 2½mm.

Hab. North Island: Thames (T. F. Cheeseman).

Note.—This species is very near *A. godeti*, mihi, but the spire is a little more elevated, the riblets are sinuated, directed backwards and low, whilst almost straight, elevated in *A. godeti;* in the latter the interstices between the ribs are reticulated, and the embryonic whorl is spirally striated. *A. rusticus* has much flatter whorls, and the suture less impressed.

7. **Charopa anguiculus**, Reeve, var. **fuscosa**, n. v.

The specimens obtained are not adult, but have only 4 whorls. The colour is uniformly fuscous, but in all the other characters they agree with Reeve's and Hutton's (Trans.

N.Z. Inst., vol. xvi., p. 163) descriptions of *C. anguiculus*. The interstices between the riblets are more distinctly reticulated in the variety.

Hab. North Island: Hunua Range (Captain T. Broun).

Genus LAOMA, Gray.

8. Laoma ciliata, n. sp. Plate XXI., figs. 38, 38*a*.

Shell minute, pupiform, perforated, pale-horny without markings, not shining, very thin and fragile, diaphanous, with oblique somewhat distant thin ribs, about six per millimetre, which are produced into a tooth-shaped membrane below the suture; a second row of ciliæ is on the body-whorl round the base, but they are mostly rubbed off; interstices with fine growth-lines. Spire elevated, first cylindrical, then dome-shaped. Embryonic whorl smooth, blunt. Periphery angled and sinuated. Whorls 6, the first three very slowly, the others more rapidly increasing in size; they are slightly convex above, rather concave below, the last carinated near the aperture; suture not deep. Aperture transverse, squarish, the outer lip sinuated, the basal slightly arched, and the columella almost straight and vertical, but little expanded above. Mouth with two lamellæ; one slender, long lamella on the middle of the outer lip, and a similar one in the angle where the outer and basal lip meet. Umbilicus previous, very narrow, but open. Base almost flat.

Diameter, 1¾mm.; height, 2mm.

Hab. North Island: Near Wanganui, where it was discovered by our most enthusiastic conchologist, Mr. R. Murdoch.

Note.—This highly-interesting little shell is totally different from most of the other species of *Laoma s. str.*; in the peculiarities of the epidermis it is allied to *Phrixgnathus regularis*, *Æschrodomus*, and *Therasia celinde* and *tamora*.

Dentition very much the same as in *Laoma leimonias*. Formula of teeth 15—1—15.

9. Phrixgnathus murdochi, n. sp. Plate XXI., figs. 39–39*b*.

Shell depressed conoidal, broadly umbilicated, pale-horny, waxen, thin, diaphanous; finely and closely radiately striated, striæ crossed by microscopical spiral lines; spire somewhat dome-shaped, rather acute at the apex; embryonic whorl smooth; periphery carinated. Whorls 6, slowly and regularly increasing, flatly concave, strongly margined, margin projecting, tessellated with white and chestnut, the last not descending in front; suture superficial. Aperture squarish, diagonal; peristome straight, acute, outer lip sinuated, basal lip nearly straight, columella straight, slightly oblique, a little reflexed above. Umbilicus broad, 45 per cent. of the diameter,

perspective, limited by a carina which forms a sinus at the base of the columella. Base flattened.

Diameter, greatest $5\frac{1}{2}$mm., least $5\frac{1}{4}$mm.; height, $2\frac{1}{2}$mm.

Hab. North Island: Rawene, near Hokianga.

Mr. R. Murdoch, of Wanganui, has been the discoverer of this most beautiful shell, and I have much pleasure in uniting his name with the species.

Note.—Only one empty shell was found, and the animal therefore remains unknown for the present. Its nearest ally is *Ph. sciadium*, Pfeiffer.

10. Phrixgnathus cheesemani, n. sp. Plate XXI., figs. 40–40*b*.

Shell conoidly semi-globose, subperforated, pale-horny, sometimes variegated with light-brown zigzag bands, which are close together, and tessellating the base; rather shining, thin, diaphanous, with irregular close-set growth lines, which are very indistinctly reticulated above by spiral lines. Spire conoidal, apex rather blunt. Embryonic whorl minutely spirally striated. Periphery angled. Whorls 6, slowly and regularly increasing, slightly rounded; suture not much impressed. Aperture oblique, broadly lunar; peristome simple, straight, acute, outer lip somewhat arched, forming an angle with the basal lip, which forms one broad arch with the columella, the latter being somewhat reflexed. Umbilicus almost completely closed up by the columella reflection. Base spirally striated, flatly rounded.

Diameter, greatest $4\frac{1}{2}$mm., least $4\frac{1}{10}$mm.; height, 3mm.

Hab. North Island: Waitakerei, near Auckland.

Named in honour of Mr. T. F. Cheeseman, curator of the Auckland Museum, to whom I am indebted for the specimens.

Dentition.—That characteristic of *Phrixgnathus*. Formula of radula 40—1—40. Remarkable for the large number of teeth on a transverse row of the radula.

EXPLANATION OF PLATES XIV.–XXI.

PLATE XIV.

Figs. 1, 2. *Gundlachia*, sp., shell $\frac{2}{1}$, River Avon.
Fig. 3. ″ ″ shell with septum, River Avon.
Fig. 4. ″ ″ jaw, magnified.
Fig. 5. ″ ″ teeth of radula, magnified.
Fig. 6. *Athoracophorus papillatus*, animal extended, natural size.
Fig. 7. ″ ″ in repose, ″
Fig. 8. ″ head from below. (Spirit specimen.)
Fig. 9. ″ anterior part, showing genital orifice. (Spirit specimen.)

PLATE XV.

Fig. 10. *Athoracophorus papillatus*, jaw.
Fig. 11. 〃 teeth of radula. C = central, L = lateral, LS. = side view of lateral.

Fig. 12. *Endodonta varicosa*, Pf., mouth.
Fig. 13. 〃 *timandra*, Hutt., mouth.
Fig. 14. 〃 *jessica*, Hutt., mouth.

PLATE XVI.

Figs. 15, 15*a*. *Charopa caput-spinulæ*, Reeve, 2 jaws, $\frac{240}{1}$.
Figs. 16, 16*a*. 〃 〃 teeth of radula, $\frac{720}{1}$.
Fig. 17. *Tesseraria novoseelandica*, Pf., animal magnified.
Fig. 18. *Laoma leimonias*, jaw, $\frac{240}{1}$.

PLATE XVII.

Fig. 19. *Laoma leimonias*, teeth of radula, $\frac{720}{1}$.
Fig. 20. *Phrixgnathus pumilus*, Hutt., part of jaw, $\frac{240}{1}$.
Fig. 21. 〃 〃 〃 marginal teeth, $\frac{720}{1}$.
Fig. 22. 〃 *microreticulatus*, jaw, $\frac{240}{1}$.
Fig. 23. 〃 〃 teeth of radula, $\frac{720}{1}$.

PLATE XVIII.

Fig. 24. *Phrixgnathus allochroid.*, v. *lateumbil.*, jaw, $\frac{240}{1}$.
Fig. 25. 〃 〃 〃 teeth of radula, $\frac{720}{1}$.
Fig. 26. *Ariophanta novaræ*, Pf., jaw, magnified.
Fig. 27. 〃 〃 teeth of radula, magnified.
Fig. 28. *Otoconcha dimidiata*, Pf., jaw, $\frac{60}{1}$.

PLATE XIX.

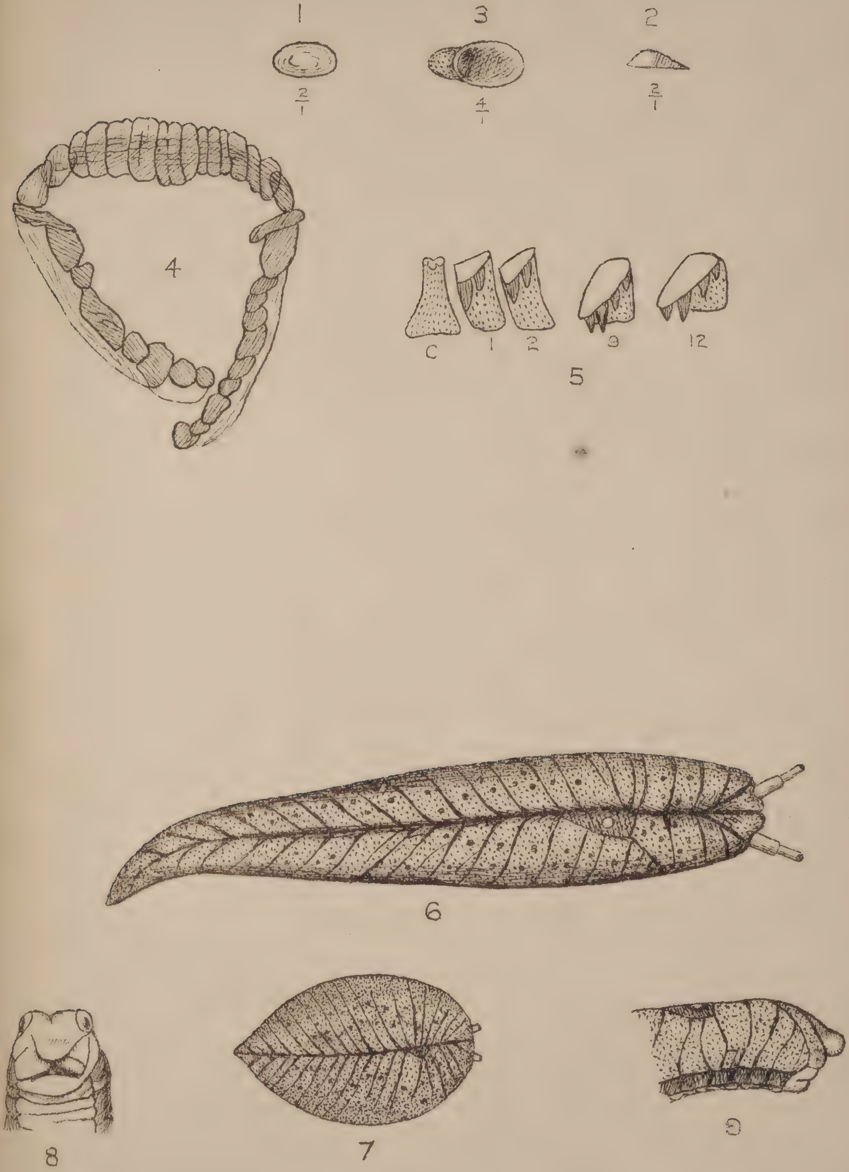
Fig. 29. *Otoconcha dimidiata*, Pf., teeth of radula, $\frac{480}{1}$.
Fig. 30. *Lagochilus fasciatum*, n. sp., shell $\frac{8}{1}$.
Fig. 31. 〃 〃 part of shell greatly magnified.
Fig. 32. *a*, *b*. *Flammulina pilsbryi*, n. sp., shell $\frac{8}{1}$.
Fig. 33. *a*, *b*. *Pyrrha subincarnata*, n. sp., shell $\frac{2}{1}$.

PLATE XX.

Fig. 34. *a*, *b*, *Pyrrha subincarnata*, n. sp., jaw, magnified.
Fig. 35. 〃 〃 teeth of radula, magnified.
Fig. 36. *a*, *b*. *Allodiscus smithi*, n. sp., shell $\frac{8}{1}$.
Fig. 37. *a*, *b*. 〃 *rusticus*, n. sp., shell $\frac{10}{1}$.

PLATE XXI.

Fig. 38. *Laoma ciliata*, n. sp., shell $\frac{10}{1}$.
Fig. 38*a*. 〃 〃 part of shell greatly magnified.
Fig. 39. *a*, *b*. *Phrixgnathus murdochi*, n. sp., shell $\frac{4}{1}$.
Fig. 40. *a*, *b*. 〃 *cheesemani*, n. sp., shell $\frac{5}{1}$.



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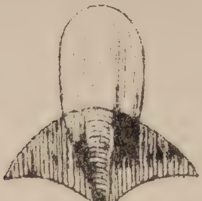

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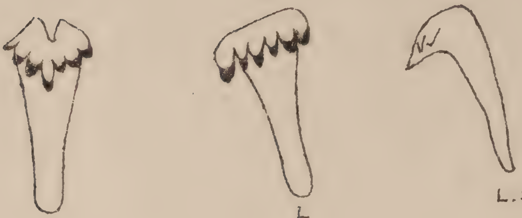

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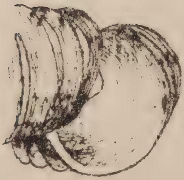

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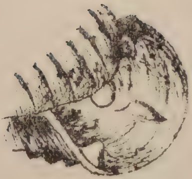

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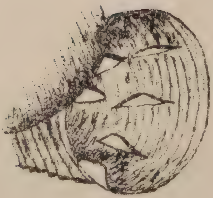

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H.S. del. *F.H.T. lith.*

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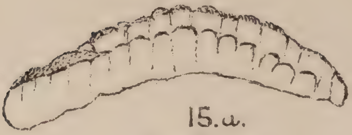

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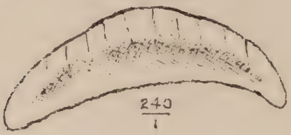

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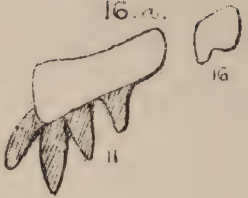

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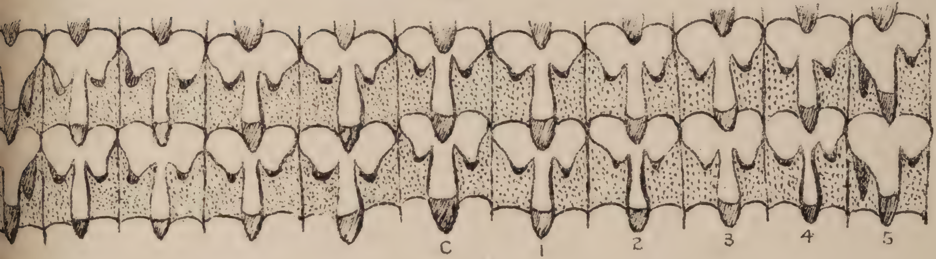

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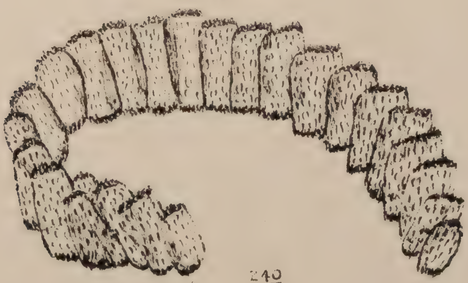

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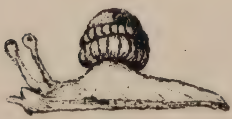

Land Mollusca.

H.S. del.
F.H.T. lith.

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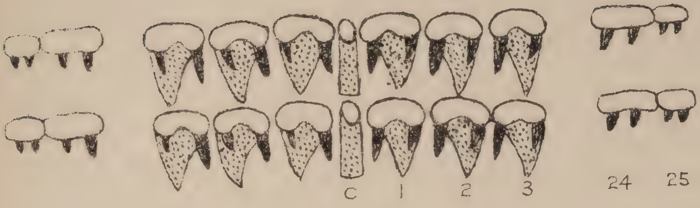

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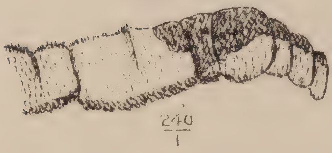

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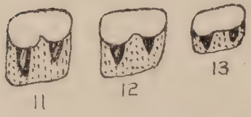

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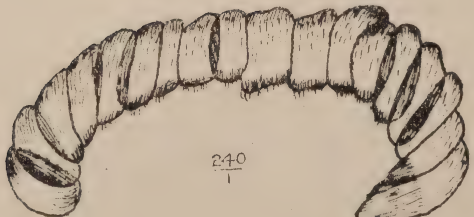

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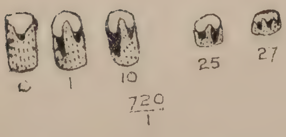

Land Mollusca.

F.H.T. lith.

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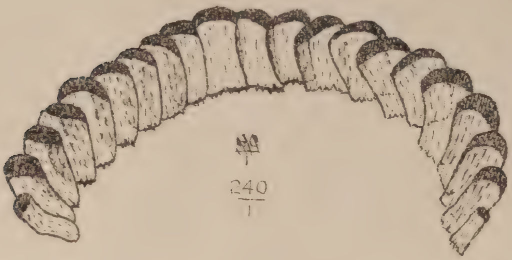

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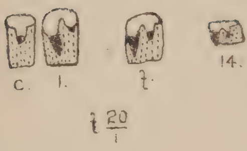

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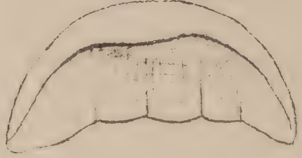

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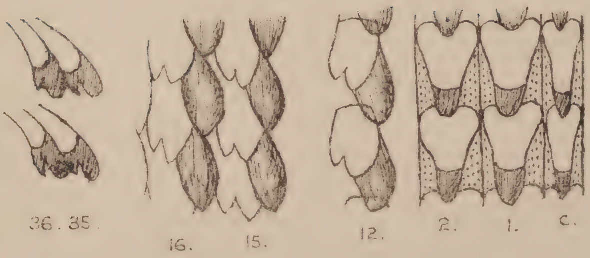

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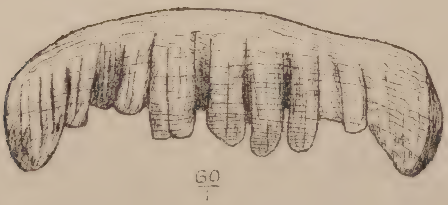

Land Mollusca.

H.S. del. *F.H.T. lith.*

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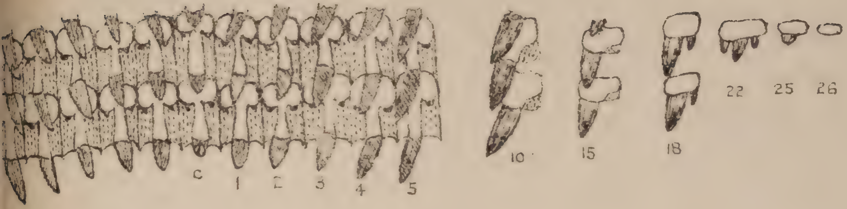

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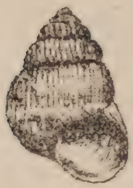

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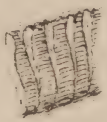

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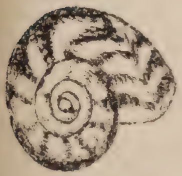

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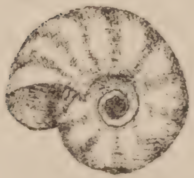

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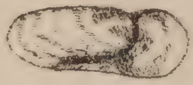

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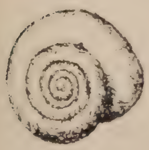

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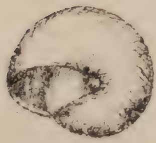

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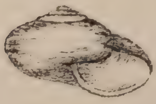
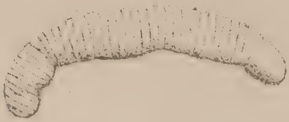


Land Mollusca.

H.S. del. F.H.T. lith.

34



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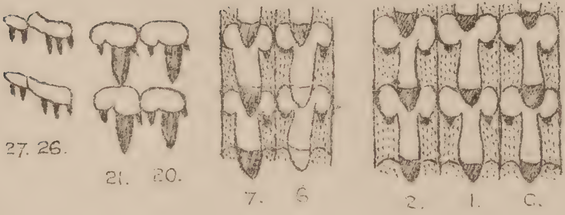
27. 26.
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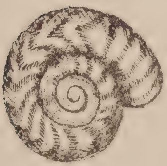
36



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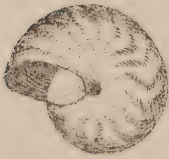

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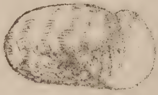

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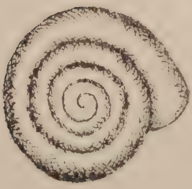

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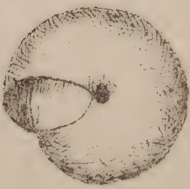

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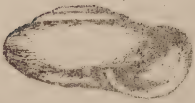
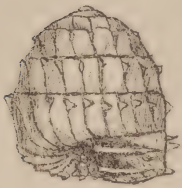


Land Mollusca.

H.S. del.

F.H.T. lith.

38



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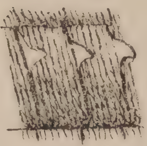

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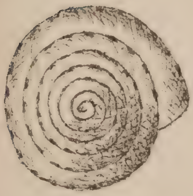

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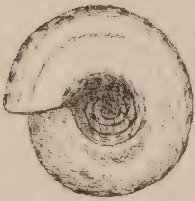

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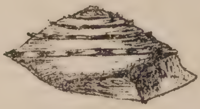

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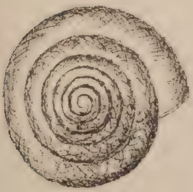

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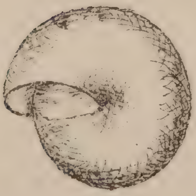

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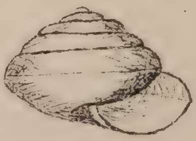


$\frac{5}{1}$

Land Mollusca.

H.S. delt.

F.H.T. lith.

From the ANNALS AND MAGAZINE OF NATURAL HISTORY,
Ser. 6, Vol. xiii., *January* 1894.

On the Dentition of Pella Burnupi, *Melvill and Ponsonby.*

By HENRY SUTER, Christchurch, New Zealand.

[Plate V. B.]

SOME time ago Mr. J. H. Ponsonby kindly sent me a number of Helicidæ from South Africa, and, on carefully examining them, I was astonished how some of them showed distinct relations to forms from New Zealand. Fortunately there was one specimen of *Pella Burnupi*, M. & P., in which the dried-up animal was left, and, after proper treatment, I succeeded in getting it out of the shell, leaving the tail well preserved. In preparing jaw and radula great care was used, as those parts of the mouth are often exceedingly fragile when the animal has been dry for a long time. The mounting of the radula was successful, but the jaw broke in several pieces, without, however, impeding the study of its detail structure.

Jaw (Pl. V. B. fig. 1) arcuate, folded in about twenty vertical plaits, which are about five times longer than broad, and strongly transversely striated. Between the plaits a small transparent interstice is left. Cutting-margin broadly indented.

Radula (fig. 2) tongue-shaped, consisting of numerous transverse straight rows of teeth, 20—1—20, of which five or six may be taken as laterals.

Central tooth quadrangular, slightly longer than broad, rounded in front; reflexion tricuspid, the median cusp reaching almost to the posterior end of the base; the side cusps short, sinuated at the outer sides; median cutting-point well developed, extending a little over the next row of teeth; the side cutting-points minute.

Laterals very much like the rhachidian, the median and the inner side cutting-point increasing slowly in size, and the former being slightly directed towards the central tooth.

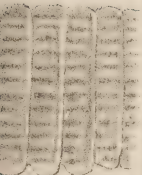
A number of intermediate teeth show a gradual reduction of the reflected portion from tricuspid to bicuspid, the median cutting-point and, more especially, the inner cutting-point increasing in length.

Marginals quadrangular, much broader than long, tridentate, the median denticle being the strongest. The eighteenth tooth sometimes with four denticles; the last with one only, rudimentary.

Animal.—Tail rounded, slightly tapering, with a mucous tail-gland. There is a pedal line and diagonal grooves on the sides of the foot.

Note.—I also examined the dentition of *Vitrina Hudsoniæ*, Benson, from South Africa, which proved to be a *Helicarion*, as I anticipated.

I



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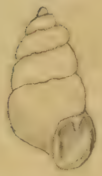
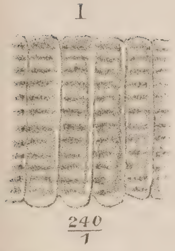


Tornatellina
novaeselandiae

1



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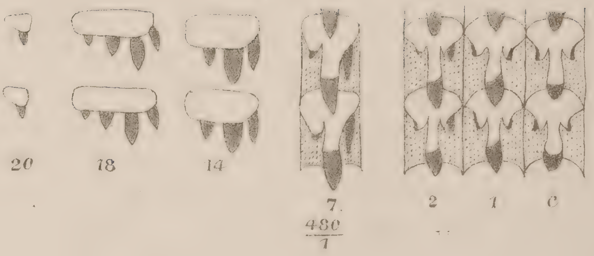

H. Suter del.

From the ANNALS AND MAGAZINE OF NATURAL HISTORY,
Ser. 6. Vol. xiii., *January* 1894.

Preliminary Notes on the Relation between the Helicidæ *of New Zealand, Tasmania, and South Africa.* By HENRY SUTER, Christchurch, New Zealand.

BEFORE entering upon the subject in question it will be necessary to say a few words as to the present classification of the New Zealand Helicidæ, which will be more or less new to most conchologists. In the "Reference List of the Land and Freshwater Mollusca of New Zealand" (Proc. Linn. Soc. N. S. W. (2) vii. p. 633) Mr. C. Hedley and the writer classed the Helices under Zonitidæ, induced by the characters of the animal—clavate eye-peduncles, distinct pedal line, diagonal grooves on the foot, and mucous tail-gland in many of them; but, in accordance with Mr. H. A. Pilsbry and Dr. von Ihering, I am now fully convinced that the New Zealand Helicidæ are really *pseudo-zonitoid* mollusks.

In 1892 I sent a collection of New Zealand land-shells to Mr. H. A. Pilsbry, and the result was his article "Observations on the Helices of New Zealand," published in 'Nautilus' (vol. vi. no. 5, p. 54). With regard to the numerous genera recognized by New Zealand conchologists the author says:—"These sections or subgenera are founded upon various modifications of the shell or jaw, but they have not sufficient distinctness to rank as genera, unless we understand that term in a much more restricted sense than it has been used by the majority of conchologists or zoologists generally." He unites the genera which formed my family Phenacohelicidæ (Trans. New Zeal. Inst. xxiv. p. 270) in one genus, *Gerontia*, establishing, amongst others, a section *Calymna*, Hutton, for the species formerly placed in the genus *Amphidoxa*, Hutton (not Albers), and subgenus *Calymna*, Hutton. For these shells, however, the name of *Flammulina* had been proposed in 1873 by von Martens ('Critical List of New Zeal. Moll.' p. 12), and was adopted by Mr. C. Hedley and myself in our "Reference List" (*l. c.* p. 643). *Gerontia* should therefore be replaced by *Flammulina* as a generic name, the former dating from 1883.

Later on Mr. H. A. Pilsbry published his "Preliminary Outline of a new Classification of the Helices" (Proc. Acad. Nat. Sci. Philad. 1892, p. 387 &c.), in which he unites all the sections of his former genus *Gerontia* (including *Endodonta*, *Charopa*, &c.) in one large genus *Endodonta* (*l. c.* pp. 401, 402). With this I cannot agree. Mr. H. A. Pilsbry was under the impression that the New Zealand *Endodonta* and *Charopa* possess a mucous tail-gland, which is not the case. I do not attach very great importance to the presence or absence of the caudal gland, as we really do not know its true significance; but in the mollusks classed under *Flammulina* the jaw is always stegognath, the radula is more or less pseudo-zonitoid, and, besides, a mucous tail-gland is always present; whilst in *Endodonta* and *Charopa* the jaw is only striated, the radula is much more helicoid, and there is no caudal gland. Moreover, according to the geographical distribution as now known to me, the two genera *Flammulina* and *Endodonta* (including *Charopa*) belong to two different types—*Endodonta* being of *Polynesian*, *Flammulina* of *Antarctic* origin. In New Zealand the *Endodonta* stock has been immigrating from the North, the *Flammulina* forms from the South and perhaps from the West and East also, or the latter may have spread from New Zealand.

These are the reasons which induce me to separate *Flammulina* from *Endodonta*, thus forming two well-defined genera.

Following chiefly Mr. H. A. Pilsbry (*l. c.* pp. 401–403) I now propose the following classification of the New Zealand Helicidæ:—

Group **Haplogona.**

Genus 1. FLAMMULINA (v. Martens, 1873), Suter.

Sect. 1. FLAMMULINA, von Martens, 1873, s. str. (=*Amphidoxa*, Hutton, not Albers). Type: *F.* ~~*compressivoluta*, Reeve.~~
zebra, Le Guillou

Subsect. CALYMNA, Hutton, 1884.
Type: *C. costulata*, Hutton.

Sect. 2. GERONTIA, Hutton, 1883.
Type: *G. pantherina*, Hutton.

Sect. 3. PHACUSSA, Hutton, 1883.
Type: *P.* ~~*hypopolia*, Pfeiffer.~~ helmsi, Hutt.

Sect. 4. THERASIA, Hutton, 1884.
Type: *T.* ~~*celinde*, Gray.~~ thaisa, Hutt.

Sect. 5. PYRRHA, Hutton, 1884.
Type: *P. cressida*, Hutton.

Sect. 6. PHENACOHELIX, Suter, 1891.
Type: *P. pilula*, Reeve.

Sect. 7. ALLODISCUS, Pilsbry, 1892 (=*Psyra*, Hutton, 1884, not Stal, 1876).
Type: *A. dimorphus*, Pfeiffer.

Sect. 8. SUTERIA, Pilsbry, 1892 (=*Patulopsis*, Suter, not Strebel, 1879).
Type: *S. ide*, Gray.

Sect. 9. THALASSOHELIX, Pilsbry, 1892 [=*Thalassia*, Hutton (? and of Albers), not *Thalassia*, Chevrolat, 1834 (Coleopt.)].
Type: *T. zelandiæ*, Gray.

Genus 2. ENDODONTA (Albers, 1850), Suter.

Sect. 1. ENDODONTA, Albers, 1850, s. str. (+*Pitys*, Pease, not Beck).
Type: *E. lamellosa*, Férussac (Hawaii).

Subsect. PTYCHODON, Ancey, 1891 (=*Huttonella*, Suter, not Pfeiffer, =*Maoriana*, Suter, 1891).
Type: *P. leioda*, Hutton.

Sect. 2. CHAROPA, Albers, 1860 (=*Simplicaria*, Mousson, MS.).
Type: *C. coma*, Gray.

(*a*) Subsect. TESSERARIA, Böttger, 1881.
Type: *T. novoseelandica*, Pfeiffer.

(*b*) Subsect. AESCHRODOMUS, Pilsbry, 1892 (=*Thera*, Hutton, 1884, not Stephens, 1831).
Type: *A. stipulatus*, Reeve.

Group **Polyplacognatha.**

Genus LAOMA (Gray, 1849), Pilsbry, 1892.

Sect. 1. LAOMA, Gray, 1849, s. str.
Type: *L. leimonias*, Gray.

Sect. 2. PHRIXGNATHUS, Hutton, 1883.
Type: *P.* ~~*Mariæ*, Gray.~~ celia, Hutt.

We can now proceed to the investigation of the *Tasmanian* land-molluscan fauna. Having for several years regarded the Tasmanian Helices as nearly allied to those of New Zealand, I was much pleased to find that Mr. H. A. Pilsbry held a similar opinion with regard to *Patula*, *Paryphanta*, *Rhytida*,

&c. ('Nautilus,' 1892, vi. p. 57). On looking through my collection of Tasmanian land-shells I fortunately found many specimens containing the dried-up animal, and these I decided to sacrifice to enable me to examine the dentition. Moreover, a short time ago Mr. W. L. May kindly assisted me by forwarding some living snails from Tasmania.

In giving the classification of some of the Tasmanian land-shells, I wish to point out that it is based on the dentition as well as on the shell-characters. The descriptions and figures of the dentition of the species will be published occasionally. The dentition of the following thirty-two species was examined:—

Genus FLAMMULINA (v. Mart.), Suter.

Sect. FLAMMULINA, von Martens, s. str.

(1) F. Jungermanniæ, *Petterd.*
(2) F. sitiens, *Cox.*
(3) F. Luckmani, *Brazier.*

Sect. GERONTIA, Hutton.

(4) G. albanensis, *Cox.*
(5) G. stanleyensis, *Petterd.*
(6) G. Legrandi, *Cox.*
(7) G. Marchian~~n~~æ, *Cox.*
(8) G. diemenensis, *Cox.*
(9) G. gadensis, ~~*Cox.*~~ Beddome
(10) G. tasmaniæ, *Cox.*
(11) G. subrugosa, *Brazier.*
(12) G. Mathinnæ, *Petterd.*
(13) G. Macdonaldi, *Cox.*
(14) G. Bassi, *Brazier.*
(15) G. tamarensis, *Petterd.*

Sect. PHACUSSA, Hutton.

(16) P. Savési, *Petterd.*
(17) P. Stephensi, *Cox.*
(18) P. Hamiltoni, *Cox.*

Sect. ALLODISCUS, Pilsbry.

(19) A. limula, *Cox.*

Sect. THALASSOHELIX, Pilsbry.

(20) T. Fordei, *Brazier.*

Genus ENDODONTA (Albers), Suter.

Sect. CHAROPA, Albers.

(21) C. antialba, *Beddome.*

Genus LAOMA (Gray), Pilsbry.

Sect. PHRIXGNATHUS, Hutton.

(22) P. Weldii, *Tenison-Woods.*
(23) P. cæsus, *Cox.*
(24) P. Henryana, *Petterd.*
(25) P. furneauxensis, *Petterd.*
(26) P. pictilis, *Tate.*
(27) P. pipaensis, *Petterd.* M.S.
(28) P. Halli, *Cox.*
(29) P. Hobarti, *Cox.*

Genus RHYTIDA, Albers.

(30) R. Sinclairi, *Pfeiffer.*
(31) R. ruga, *Cox.*

Genus RHENEA, Hutton.

(32) R. nelsonensis, *Brazier.*

It is a most astonishing fact how close the relation between the Tasmanian and New Zealand molluscan fauna really is, more so than I ever anticipated. Of nine sections of the genus *Flammulina* occurring in New Zealand, five are represented in Tasmania. Most remarkable is the preponderance of *Gerontia*, a section represented in New Zealand by two species only, and of *Phrixgnathus*, which is also well represented in New Zealand. A very striking feature is the almost total absence of *Endodonta*, the Polynesian element, there being only one species of *Endodonta*, s. str., and one of *Charopa* known from Tasmania. *Rhytida* is more abundant in Tasmania, whilst *Rhenea* is represented by two species in each country.

With regard to the relation between the land molluscan fauna of New Zealand, Tasmania, and *South Africa*, I do not know much at present; yet the little knowledge available seems of great importance. The genus *Ærope* is no doubt nearly allied to *Rhytida*; but the most important fact has been brought to our knowledge by the examination of the dentition and part of the animal of *Pella Burnupi*, M. & P. The authors of this species state that it is of allied character to *P. bisculpta*, Benson, the type of *Pella*, and the dentition given may therefore be taken as typical for the section or genus. I have studied the dentition of most of the New Zealand land and freshwater shells, and, as shown above, of a good many from Tasmania, and I may therefore be allowed to give my opinion as to the systematic position of *Pella Burnupi*, M. & P., and *Pella* generally. I have not the slightest doubt that it must be classed under *Haplogona* next to *Flammulina*.

The dentition and part of the animal which I was able to examine closely resemble those of *Flammulina*, s. str., and *Gerontia* from New Zealand and Tasmania; and I think that the South-African genus *Pella* belongs to the *Antarctic* molluscan fauna, which no doubt dates back to the Cretaceous period at least.

There are other South-African land-shells which seem to me to be more or less closely allied to forms from New Zealand, and I hope to obtain the animals for examination.

[With regard to the genus *Pella*, as alluded to in the above article, we would refer our readers to the remarks made by Mr. Pilsbry in the 'Manual of Conchology,' vol. viii. pp. 135 *et seq.*—Eds. *Ann. & Mag. Nat. Hist.*]

[TRANSACTIONS OF THE NEW ZEALAND INSTITUTE,
VOL. XXVIII.]

ART. XXIX.—*Further Contributions to the Molluscan Fauna of New Zealand.*

By HENRY SUTER.

Communicated by Captain Hutton, F.R.S.

[*Read before the Philosophical Institute of Canterbury, 5th November, 1895.*]

IN volumes xxiv. and xxv. of these Transactions I published lists of the land and fresh-water shells found at various places in this colony. More material having accumulated in my collection, I now wish to publish some additional lists, thus helping to enlarge the knowledge of the geographical distribution of some of our Mollusca, which is still very far from satisfactory. Most of our land-shells being minute or small, and living concealed in the bush under logs, stones, dead leaves, bark, &c., during day-time, it is not astonishing that much remains to be done in the way of collecting, and that new forms are still turning up when a careful search for shells is made.

I.—*Mount Wellington Lava-fields, Auckland.*

In volume xxiv. of the Transactions, pp. 277, 278, a list of shells from this locality was given, collected by Mr. C. Musson. Last summer I had a couple of hours collecting on these lava-fields, and found the following additional species:—

Flammulina (*s. str.*) *pilsbryi*, Suter.
" (*Therasia*) *celinde*, Gray.
" " *tamora*, Hutton.
Endodonta (*Thaumatodon*) *timandra*, Hutton.*
" (*Ptychodon*) *hunuaensis*, Suter.
" (*Charopa*) *buccinella*, Reeve.†
" " *anguiculus*, Reeve.
" " *corniculum*, Rve., var. *maculata*, Sut.
" " " " f. *albina*.
Laoma (*Phrixgnathus*) *pumila*, Hutton.
" " *ariel*, Hutton.
" " *allochroida*, Suter, var. *lateumbilicata*, Suter.
" " *moellendorffi*, sp. nov.

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* Erroneously "*varicosa*, Pfr." in former list.
† = "*sylvia*, Hutton," in former list.

II.—*Nikau Bush, Titirangi, near Auckland.*

About one hour of collecting produced the following shells:—

Lagochilus hedleyi, Suter.
Realia egea, Gray.
„ *carinella*, Pfr.
Flammulina (*Therasia*) *celinde*, Gray.
„ (*Carthæa*) *kivi*, Gray.
„ (*Phenacohelix*) *pilula*, Reeve.
„ (*Allodiscus*) *dimorpha*, Pfr.
„ „ *planulata*, Hutton.
Endodonta (*Thaumatodon*) *timandra*, Hutton.
„ (*Ptychodon*) *hunuaensis*, Suter.
„ (*Charopa*) *coma*, Gray.
„ „ *infecta*, Reeve.
„ „ *bianca*, Hutton.
„ „ *titirangiensis*, sp. nov.
Laoma (*s. str*) *pœcilosticta*, Pfr.
„ (*Phrixgnathus*) *glabriuscula*, Pfr.
„ „ *ariel*, Hutton.

III.—*Tarukenga, near Rotorua.*

The following shells were collected and kindly given to me by Captain T. Broun:—

Realia carinella, Pfr.
Flammulina (*s. str.*) *zebra*, Le Guillou.
„ „ *crebriflammis*, Pfr.
„ „ *pilsbryi*, Suter.
„ (*Therasia*) *tamora*, Hutton.
„ (*Phenacohelix*) *pilula*, Reeve.
„ (*Thalassohelix*) *ziczac*, Gould.
Endodonta (*Ptychodon*) *pseudoleioda*, Suter.
„ (*Charopa*) *caput-spinulæ*, Reeve.
„ „ *roseveari*, sp. nov.
Laoma (*s. str.*) *leimonias*, Gray.
„ „ *marina*, Hutton.
„ (*Phrixgnathus*) *mariæ*, Gray.
„ „ *conella*, Pfr.
„ „ *phrynia*, Hutton.
„ „ *allochroidus*, Suter, var. *lateumbilicata*, Suter.
Rhenea coresia, Gray.

IV.—*Heretaunga, Hawke's Bay.*

I am indebted to Mr. A. Brooks for the following shells:—

Flammulina (*s. str.*) *compressivoluta*, Reeve.
" (*Phenacohelix*) *pilula*, Reeve.
" (*Suteria*) *ide*, Gray.
Endodonta (*Ptychodon*) *pseudoleioda*, Suter.
" (*Charopa*) *coma*, Gray.
" " *infecta*, Reeve.
" " *biconcava*, Pfr.
" " *bianca*, Hutton.
" " *tapirina*, Hutton.
" " *colensoi*, Suter.
Laoma (*Phrixgnathus*) *mariæ*, Gray.
" " *conella*, Pfr.

V.—*Dannevirke, Waipawa.*

The same collector:—

Athoracophorus bitentaculatus, Q. and G. (=*maculatus*, Collinge).
Flammulina (*Thalassohelix*) *propinqua*, Hutton.
" (*Phacussa*) *hypopolia*, Pfr.
" (*Allodiscus*) *dimorpha*, Pfr.
" " *adriana*, Hutton.
" " *planulata*, Hutton.
Endodonta (*Ptychodon*) *hunuaensis*, Suter.
" (*Charopa*) *coma*, Gray.
" " " " var. *globosa*, Suter.
" " *corniculum*, Reeve.
" " *lucetta*, Hutton.
" " *anguiculus*, Rve., var. *montivaga*, Sut.
" " *tapirina*, Hutton.
" " *bianca*, Hutton.
" (*Phenacharopa*) *novoseelandica*, Pfr.
Laoma (*Phrixgnathus*) *ariel*, Hutton.

VI.—*Environs of Pelorus Sound.*

Mr. Joseph McMahon, a most enthusiastic collector, kindly sent me a large number of shells, consisting of,—

Melanopsis trifasciata, Gray.
Potamopyrgus cumingiana, Fischer.
" *corolla*, Gould.
Lagochilus lignarium, Pfr.
Hydrocena purchasi, Pfr.
Bullinus variabilis, Gray.
Athoracophorus (*Konophora*) *marmoreus*, Hutton.
" (*Pseudaneitea*) *papillatus*, Hutton.
" " " var. *nigricans*.
" " " var. *fasciata*.

Flammulina (*s. str.*) *zebra*, Le Guillou.
" " *crebriflammis*, Pfr.
" " *perdita*, Hutton.
" (*Phacussa*) *hypopolia*, Pfr.
" (*Therasia*) *traversi*, Smith.
" (*Pyrrha*) *cressida*, Hutton.
" (*Phenacohelix*) *pilula*, Reeve.
" (*Allodiscus*) *tullia*, Gray.
" " *planulata*, Hutton.
" (*Suteria*) *ide*, Gray.
" (*Thalassohelix*) *zelandiæ*, Gray, var. *antipoda*, H. and J.
Endodonta (*Thaumatodon*) *jessica*, Hutton.
" " *timandra*, Hutton.
" (*Ptychodon*) *hectori*, Suter.
" " *pseudoleioda*, Suter.
" " *microundulata*, Suter.
" " *wairarapa*, Suter.
" " *hunuaensis*, Suter.
" (*Charopa*) *coma*, Gray.
" " *buccinella*, Reeve.
" " *anguiculus*, Reeve.
" " *infecta*, Reeve.
" " " " var. *irregularis*, Sut.
" " *bianca*, Hutton.
" " " " var. *montana*, Suter.
" " *tapirina*, Hutton.
" " " " f. *albina*.
" " *lucetta*, Hutton.
" " *caput-spinulæ*, Reeve.
" " *subantialba*, Suter.
Laoma (*s. str.*) *marina*, Hutton.
" (*Phrixgnathus*) *celia*, Hutton.
" " *glabriuscula*, Pfr.
" " *regularis*, Pfr.
" " *spiralis*, sp. nov.
Otoconcha dimidiata, Pfr.
Rhytida meesoni, Suter.
Unio menziesii, Gray.
Pisidium novæ-zelandiæ, Prime.

VII.—*Springburn, Mount Somers.*

Professor A. Dendy collected the following species:—

Athoracophorus (*Pseudaneitea*) *dendyi*, sp. nov.
Flammulina (*Therasia*) *thaisa*, Hutton.
" (*Allodiscus*) *planulata*, Hutton.
" " *adriana*, Hutton.
" (*Thalassohelix*) *igniflua*, Reeve.

Endodonta (*Charopa*) *coma*, Gray.
" " *anguiculus*, Rve., var. *montivaga*, Sut.
" " *sterkiana*, Suter.
" (*Æschrodomus*) *barbatula*, Reeve.

VIII.—*Toitoi, Fortrose, Southland.*

To Miss J. G. Rich I am indebted for the following Mollusca:—

Flammulina (*Phacussa*) *hypopolia*, Pfr.
" (*Phenacohelix*) *chordata*, Pfr.
" (*Allodiscus*) *planulata*, Hutton.
Endodonta (*Charopa*) *tapirina*, Hutton.
" " *anguiculus*, Rve., var. *montivaga*, Sut.
" " *sterkiana*, Suter, f. *major*.
" " *moussoni*, Suter.
" (*Æschrodomus*) *stipulata*, Reeve.
Laoma (*Phrixgnathus*) *celia*, Hutton.

Additions to the List of Introduced Mollusca.

Limnæa auricularia, L. Wanganui (R. Murdoch).

Aneitea graeffei, Humbert. Port Chalmers (Dr. Chilton); Collingwood (J. Dall).

Cionella lubrica, Müller. Auckland (Wright; H. S.).

Vallonia excentrica, Sterki. Auckland.

This shell was mentioned in my former list as *V. pulchella*, Müller. Since then Dr. Sterki has published a study on the genus *Vallonia*, and described the n. sp. *excentrica*, with which our shell perfectly agrees. It has very likely been introduced from England.

Hyalinia alliaria, Miller, I found in a paddock at Henderson, near Auckland.

H. Hamilton Esqre,

with the author's compliments.

[*From the* 'PROCEEDINGS OF THE MALACOLOGICAL SOCIETY,' Vol. II,
Part 1, April, 1896.]

DESCRIPTIONS OF SOME NEW LAND MOLLUSCA FROM NEW ZEALAND AND MACQUARIE ISLAND.

By HENRY SUTER, Christchurch, New Zealand.

Read 10th January, 1896.

PLATE IV.

1. LAGOCHILUS CHILTONI, n.sp. Pl. IV, Fig. 1.

Shell very small, turbinate, subperforate, rufous, slightly glossy, thin, semi-transparent, with rather close longitudinal membranous white costellæ, which easily rub off; they are nearly equidistant, five to six per millimetre. Spire conical, apex rather pointed; periphery rounded; whorls 5, convex, the first three increasing slowly, the others more rapidly, faintly microscopically spirally striated, the body-whorl about two-thirds of the total height; suture impressed. Aperture subcircular, slightly oblique; peristome simple, straight; notch at the suture very slightly indicated; columella lip somewhat callous, expanded, completely covering the small umbilicus; margins convergent, not united by a callus. Base rounded. Operculum not seen. Alt. 3, diam. 2·25 mm.

Type in my collection.

Hab.—Fern Flat, Buller River, South Island. A single specimen found under a log by Dr. Ch. Chilton, whose name I have much pleasure in connecting with this species.

L. Chiltoni is near to *L. Hedleyi*, Sut., but the latter is more depressed, the membranous plaits are not equidistant on the body-whorl, the margins of the aperture approximate more, and the narrow umbilicus is open.

2. LAGOCHILUS (?) STUDERI, n.sp. Pl. IV, Fig. 2.

Shell very small, globosely conoidal, perforate, whitish-horny, faintly glossy, fragile, transparent, smooth, showing under the lens regular and close lines of growth. Spire conoidal, rather short; whorls 3½, rather rapidly increasing, convex, slightly flattened below the suture; periphery rounded; suture deep. Protoconch smooth, rather obtuse. Aperture ovate, longitudinal; peristome simple, acute, outer lip regularly arched, basal lip strongly convex, columella lip almost straight, vertical; margins converging, not connected by any callosity. There is no indication of a notch at the suture. Umbilicus pervious, very narrow. Base convex. Operculum thin, horny, transparent, with few whorls round a subcentral nucleus. Alt. 3, diam. 2·25 mm.; height of aperture 1·5 mm.

Type in my collection.

Hab.—Whangarei, North Island (Mr. Grosch).

Named in honour of Prof. Dr. Th. Studer, Berne, Switzerland.

The only specimen I possess is immature, so that the generic position is somewhat doubtful.

3. ATHORACOPHORUS (PSEUDANEITEA) SIMROTHI, n.sp. Pl. IV, Figs. 3, 4.

Animal (in spirit) elongate, about five times longer than broad, fulvous; head broadly rounded, tail tapering; back rounded, presenting a botryoidal appearance owing to the numerous strongly developed papillæ; it is separated from the foot by a broad lateral groove, keeled towards the sole, which is lighter-coloured; dorso-median groove, bifurcating towards the head, distinct, extending to the tail. There are about twenty lateral grooves on each side, and a lateral area contains two to three rather large papillæ. These papillæ are oval, 1 × 1·5 mm., on the central part of the body, and about ·75 to 1 mm. high; the interstices between are granulate. The mantle-area, which I cannot make out distinctly in the specimen before me, seems to be triangular, the pulmonary orifice being situated at its anterior angle. The lateral grooves, the keel, and the sole are crossed by numerous transverse furrows. Length 30, breadth 2, height 5 mm. (alcoholic specimen).

Type in my collection.

Hab.—Collingwood, South Island (Mr. J. Dall).

Named in honour of Dr. H. Simroth, of Leipzig.

This slug is so distinct and peculiar in its appearance that I will not defer its preliminary description any longer. I have only one specimen, and that in a rather bad state of preservation, since the animal was probably placed alive in strong alcohol. The diagnosis and the sketches I give must be considered as merely provisional. I hope to get some living specimens later on, when the description will be completed, better figures given, and the anatomy investigated. I do not doubt that this species must be assigned to the subgenus *Pseudaneitea*, since it possesses the main characters of *Athoracophorus papillatus*, Hutton.

The New Zealand species of *Athoracophorus* now known to science are :—

A. bitentaculatus, Q. and G.
A. maculatus, Collinge.
A. (*Konophora*) *marmoreus*, Hutt.
A. (*Pseudaneitea*) *papillatus*, Hutt.
A. (*Pseudaneitea*) *papillatus* v. *nigricans* (v. Mts. MS.), Simroth.
A. (*Pseudaneitea*) *papillatus* v. *fasciatus* (v. Mts. MS.), Simroth.
A. (*Pseudaneitea*) *Simrothi*, Sut.

4. ENDODONTA (CHAROPA) ROSEVEARI, n.sp. Pl. IV, Figs. 5–7.

Shell small, subdiscoidal, umbilicated, horny, with radiate rufous streaks which are irregularly disposed on the upper surface, form zigzag lines on the periphery, and are obscurely tessellated on the base; dull, thin, semi-transparent. Spire flatly depressed; periphery

rounded; whorls 5, slowly and regularly increasing, rounded, the last not descending in front; suture impressed; whorls radiately costate, the costæ sharp and elevated, directed forwards, arcuate on the upper surface, sinuate on the periphery and base, about ten per millimetre, interstices minutely decussate. Protoconch having fine, narrow costæ, obtuse. Aperture lunate, oblique; peristome regularly arched, straight, acute, the outer lip tapering, columella lip short, arcuate, not reflexed; margins convergent; umbilicus broad, nearly one-fourth of the greatest diameter, showing all the whorls; base rounded. Diam. max. 4, min. 3·5; alt. 2 mm.

Type in my collection.

Hab.—Tarukenga near Rotorua, North Island (Capt. T. Broun).

Named in honour of Mr. B. Rosevear, Fulham, London.

This species is nearest to *E. Sterkiana*, Sut., but may at once be distinguished from it by the costæ being wider apart.

5. ENDODONTA (CHAROPA) TITIRANGIENSIS, n.sp. Pl. IV, Figs. 8–10.

Shell small, discoidal, umbilicated, thin, horny, without colour markings, semi-transparent, dull; longitudinally costate, the costæ not much raised, slightly directed backwards, sinuated at the periphery; interstices with fine lines of growth, 9–10 costellæ per millimetre. Whorls 5, the first three gradually increasing, the last attaining relatively a considerable development, taking up about one-third of the maximum diameter; suture well impressed. Protoconch smooth, spire flat, periphery rounded. Aperture rotundly lunate, oblique; peristome straight, acute, columella lip slightly callous and reflexed; margins converging. Umbilicus about one-third of the greatest diameter, showing all the whorls. Base rounded. Diam. maj. 3·75, min. 3·25; alt. 1·75 mm.

Type in my collection.

Hab.—Nikau-bush, Titirangi, near Auckland (H. S.).

This shell is closely allied to *E. anguiculus*, Reeve, var. *montivaga*, Sut., but differs from it in the greater diameter of the four first whorls, the broader last whorl, etc.

6. LAOMA ELEGANS, n.sp. Pl. IV, Figs. 11, 12.

Shell minute, conoidal, perforate, horny, without colour markings, somewhat glossy, thin, transparent, surface radiately costate, the very distinct costellæ straight, directed backwards, 15 per millimetre. Spire dome-shaped; periphery slightly keeled; whorls 5, flatly rounded, gradually and slowly increasing; suture impressed. Protoconch smooth, rather large. Aperture transverse, semicircular, with six long slender lamellæ, two on the penultimate whorl and four on the base, the latter lying far back, and only showing through the transparent shell on the exterior as white lines. Peristome straight, acute, basal lip broadly rounded, columella lip slightly callous, reflexed; margins only very slightly approximate. Umbilicus narrow, but pervious, not covered by the columellar reflection. Base smooth up to the periphery; whitish, flatly rounded. Diam. 2, alt. 1·5 mm.

Type in my collection.

Hab.—Whangarei, North Island (Mr. Grosch).

L. elegans is very distinct from all the species of the genus hitherto described; the aspect of the base and character of the lamellæ call to mind some of the species of *Sagda*.

7. LAOMA (PHRIXGNATHUS) LUCIDA, n.sp. Pl. IV, Figs. 13–15.

Shell very small, depressly-turbinate, subperforate, yellowish-horny, shining, pellucid, thin, somewhat smooth, with fine lines of growth (more distinct at the suture), microscopically finely decussate. Spire conoidal; periphery rounded; whorls 5, gradually increasing, rounded; suture rather deep. Protoconch smooth. Aperture lunate, transverse; peristome straight, acute, somewhat callous, columella lip subvertical, slightly reflexed. Umbilicus very narrow, partly covered by the columella lip. Base rounded. Diam. maj. 3, min. 2·75; alt. 2 mm.

Type in my collection.

Hab.—Near Auckland, exact locality not stated (Mr. Wright).

This species comes nearest to *L. transitans*, Suter, which, however, is higher, banded with chestnut, and has the periphery keeled.

The jaw and radula are typical, the former being strongly papillate. The formula of the radula is 20–1–20.

—— var. ELEVATA, n.var.—This variety is higher; the number of whorls is the same, but they are narrower, especially the fourth and fifth. The protoconch is also smooth, and the shell microscopically finely decussate. The colour is darker, the periphery keeled, and the mouth destitute of callosity. Diam. maj. 3, min. 2·75; alt. 2·5 mm.

Type in my collection.

Hab.—Whangarei, North Island (Mr. Grosch).

8. LAOMA (PHRIXGNATHUS) SPIRALIS, n.sp. Pl. IV, Figs. 16–18.

Shell very small, depressly-turbinate, perforate, pale-horny with somewhat irregular radiate rufous streaks, dull, thin, semi-transparent, with close-set longitudinal membranous costellæ, produced into ragged processes at the periphery; there are five to six costellæ per millimetre; the interstices decussate. Spire conoidal, apex pointed, periphery sharply keeled; whorls 5, gradually increasing, flatly rounded; suture impressed, somewhat constricted, between the fourth and fifth whorls. The protoconch is smooth, but the rest of the shell is distinctly spirally striated, most conspicuously so on the base. Aperture transverse, squarish; peristome straight, acute, outer lip sharply keeled, basal lip regularly broadly arched, columella lip subvertical, slightly arched, and reflexed. Umbilicus narrow, pervious, deep. Base rounded. Diam. maj. 3·25, min. 2·75; alt. 2 mm.

Type in my collection.

Hab.—Pelorus Sound, Marlborough, South Island (Mr. J. McMahon).

L. spiralis stands nearest to *L. phrynia*, Hutton, but differs from it in having a more acute spire and a sharper keel on the periphery, in its less rounded whorls with their very distinct spiral striation, in possessing ragged processes to the costellæ, and a much narrower umbilicus as well as a constricted portion of the suture.

Note.—LAOMA (PHRIXGNATHUS) ACANTHINULOPSIS, Sut., which I described in Trans. New Zeal. Inst., vol. xxiii (1891), is a synonym of *Laoma* (*Phrixgnathus*) *phrynia*, Hutton. Since my description was published, well-preserved specimens of *L. phrynia* have come into my possession, and, after careful comparison, I have come to the conclusion that my species is nothing more than a local variety.

9. LAOMA (PHRIXGNATHUS) MOELLENDORFFI, n.sp. Pl. IV, Figs. 19–21.

Shell very small, depressly-turbinate, pale-horny with irregular radiate streaks of chestnut; faintly glossy, very thin, semi-transparent, smooth, microscopically decussate. Spire broadly conoidal, arched; periphery slightly keeled; whorls 4, gradually increasing in size, convex, the last not descending in front. Protoconch smooth, blunt. Aperture transverse, lunate; peristome straight, acute, outer lip somewhat keeled, basal lip broadly arched, columella lip subvertical, slightly reflexed, and callous. Umbilicus narrow, deep, one-sixth of the major diameter. Base rounded. Diam. 2·5, alt. 1·5 mm.

Type in my collection.

Hab.—Mt. Wellington lava-fields, Auckland (H. S.).

This is another species closely allied to *L. phrynia*, but it is smaller, more depressed, is not ribbed, is microscopically decussate, and has a slightly narrower umbilicus. Named in honour of Dr. O. F. von Möllendorff, Manila.

10. LAOMA (PHRIXGNATHUS) HAMILTONI, n.sp. Pl. IV, Figs. 22–24.

Shell minute, subdiscoidal, umbilicated, yellowish-horny, glossy, pellucid, smooth, with distinct lines of growth, impressed at the suture, not decussate. Spire flat, but little elevated; periphery rounded; whorls 3½, slowly and regularly increasing, convex, the last not descending. Protoconch microscopically spirally striate. Aperture diagonal, rotundly lunate; peristome straight, acute, outer and basal lip regularly rounded, columella almost straight, oblique, much reflexed. Umbilicus about one-eighth of the diameter, deep. Base rounded. Diam. maj. 2·5, min. 2; alt. 1·25 mm.

Type in my collection.

Hab.—Macquarie Island, where it was found by Mr. A. Hamilton, of Dunedin, in whose honour the species is named.

The specimens were kindly given to me by Prof. J. T. Parker, of Dunedin.

This species has its nearest allies, such as *Laoma occultus*, Cox, etc., in Tasmania; and it is no doubt also very near to *L. Campbellica*, Filhol, but I have not yet seen that species.

11. LAOMA (PHRIXGNATHUS) SUBLUCIDA, n.sp.

Shell small, depressly-turbinate, subperforate, whitish-horny, glossy, semi-transparent, smooth, with faint, radiate, rufous streaks extending to the umbilicus, not decussate. Whorls 5, gradually increasing, flatly rounded; suture impressed; periphery rounded. Protoconch smooth. Aperture transverse, lunate; peristome straight, acute, slightly callous; outer and basal lip regularly arched, columella lip very short, oblique, callous, reflexed, and partly covering the very narrow and pervious umbilicus. Base flatly rounded. Diam. maj. 3, min. 2·75; alt. 2 mm.

Type in my collection.

Hab.—Waitakerei, Auckland (Mr. T. F. Cheeseman).

This species is intermediate between *L. transitans* and *L. lucida.* It is distinguished from the latter by the colour-markings, the absence of microscopical spiral striation, and the more opaque texture. *L. transitans* differs from it in the higher spire, the distinct growth-lines, and the acute keel at the periphery.

No figure is given, as the outline of the shell is very similar to that of *L. lucida.*

EXPLANATION OF PLATE.

Fig.	1.	Lagochilus Chiltoni, n.sp.	(× 6.)
,,	2.	,, (?) Studeri, n.sp.	(× 6.)
,,	3, 4.	Athoracophorus Simrothi, n.sp.	(nat. size.)
,,	5–7.	Endodonta Roseveari, n.sp.	(× 10.)
,,	8–10.	,, Titirangiensis, n.sp.	(× 8.)
,,	11, 12.	Laoma elegans, n.sp.	(× 15.)
,,	13–15.	,, lucida, n.sp.	(× 6.)
,,	16–18.	,, spiralis, n.sp.	(× 6.)
,,	19–21.	,, Moellendorffi, n.sp.	(× 10.)
,,	22–24.	,, Hamiltoni, n.sp.	(× 8.)

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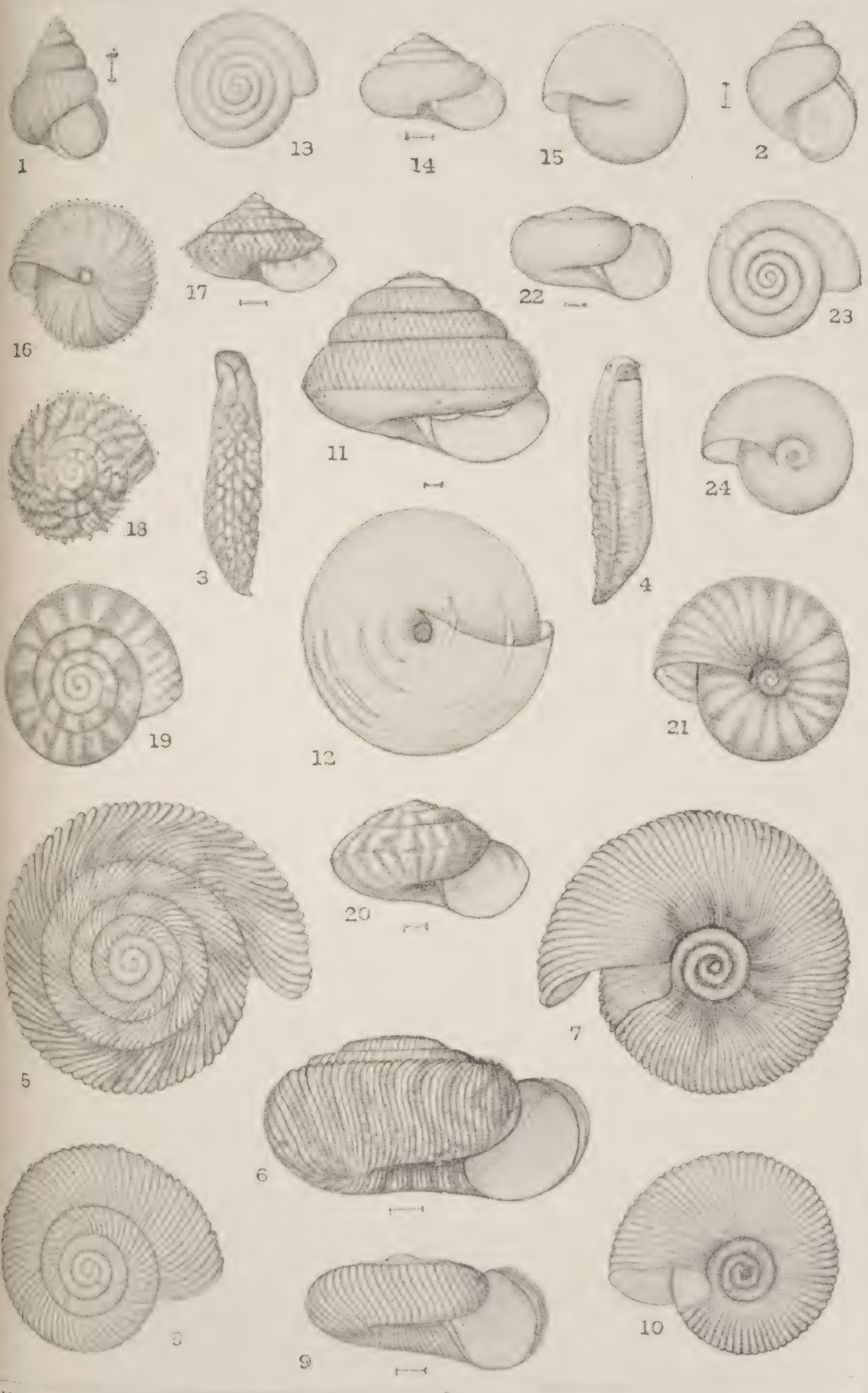

H. Suter, del.

NEW LAND-SHELLS FROM NEW ZEALAND.

[*From the* 'Proceedings of the Malacological Society,' Vol. II,
Part 6, November, 1897.]

A REVISION OF THE NEW ZEALAND ATHORACOPHORIDÆ.

By Henry Suter.

Read 9th April, 1897.

During the last few years I have tried to get specimens of our native slugs from as many localities as possible, and the material thus brought together, comprising all the species known, enables me to attempt this revision. Since publishing the "Reference List of the Land and Fresh-water Mollusca of New Zealand,"[1] in 1893, Mr. W. E. Collinge has described *Janella maculata*[2] from specimens I sent him, collected in the Forty Mile Bush, North Island. As will be shown later on, I do not consider Mr. Collinge's species new; however, its creation has demonstrated that we have more distinct species than I was willing to admit in the "Reference List."

Then Cockerell's *Neojanella dubia*[3] required investigation, as well as Simroth's *Athoracophorus marmoratus*. The former I considered to be synonymous with *A. bitentaculatus*, Quoy & Gaim., the latter with *A. marmoreus*, Hutton, but in both cases I was wrong. Specimens are now in my possession, and on examining and dissecting them I convinced myself that my former conclusions were erroneous.

A new species, *A. Simrothi*, which exteriorly is very distinct from all the other species, has been described in these Proceedings (ante, p. 34), and with another interesting new species brings up the number of known species to eight, three only having been admitted in the "Reference List."

Mr. Collinge was no doubt quite right when, in concluding his paper (t.c., p. 530), he expressed the opinion that the whole family Janellidæ required revision, and that a series of coloured drawings taken from living specimens should be provided. Unfortunately my means are too limited to undertake the latter task; while with regard to the present revision of the New Zealand Athoracophoridæ I am fully aware that it is very far from being exhaustive, leaving many questions concerning the members of this very interesting family untouched, especially their more detailed anatomy.

The very peculiar and interesting structure of the eyes, as demonstrated by Dr. Simroth in *A. marmoratus*,[4] on which he based his division of the Stylommatophora (t.c., p. 85) into Pleurommatophora (true land-pulmonata) and Mesommatophora (Athoracophoridæ), seems not to be generally known, though highly important.

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[1] Proc. Linn. Soc. New South Wales, ser. II, vol. vii, pp. 613-665.
[2] Proc. Zool. Soc., 1894, p. 527.
[3] Proc. Zool. Soc., 1891, p. 217.
[4] Nova Acta Acad. Cæs. Leop. Carol., Bd. liv, p. 76, pl. iv, figs. 19, 20.

One of our species, *A. marmoratus*, Mts., approaches the genus *Aneitea* in the situation of the anus close to the mantle-area. There is no diverticulum of the crop in *Athoracophorus*, such as occurs in *Aneitea Graeffei*, according to Keferstein and Bergh, the crop having been taken for the stomach. A renal duct is always present in *Athoracophorus*, but it seems to be wanting in *Aneitea*.

KEY TO SPECIES.

A. Mantle-area not defined.
- *a.* Colour dirty yellow, with darker spots and dashes.
    - *b.* Body semi-cylindrical, long and narrow, dorsal grooves slight, penis *narrowed abruptly* in the middle, thence convolute and thin. *dubius.*
    - *bb.* Back much more flattened, dorsal grooves more distinct, penis *narrowing gradually* towards its distal end. *bitentaculatus.*
- *aa.* Colour dirty yellow, without spots. Penis short, no convoluted distal portion. *antipodarum.*

AA. Mantle-area well defined.
- *a.* Anal opening near the foot margin, below the pulmonary orifice.
    - *b.* Back more or less strongly granulate and papillate.
        - *c.* A few slightly larger papillæ in each lateral area on the back, which are not very conspicuous. Free oviduct not dilated. *papillatus.*
        - *cc.* One, or usually two, large, conspicuous papillæ of lighter colour in each lateral area on the back, near the median dorsal groove. Free oviduct dilated. *Dendyi.*
        - *ccc.* The whole back covered with large, oval papillæ, giving it a grape-like appearance. *Simrothi.*
    - *bb.* Back smooth, or faintly granulate, colour dark, marbled. *marmoreus.*
- *aa.* Anal opening outside the right anterior angle of mantle-area. Largest species. *marmoratus.*

Fam. ATHORACOPHORIDÆ,

Including the genera *Athoracophorus*, Gould; *Aneitea*, Gray; ? *Aneitella*, Cockerell.

Genus ATHORACOPHORUS, Gould.

Gould, U.S. Explor. Exped. Moll., vol. xii (1852), p. 1.
(*Janella*, Gray, 1850, *non* Grateloup, 1838.)

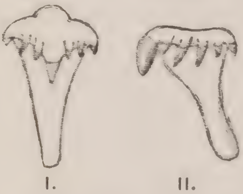
Sect. I. ATHORACOPHORUS, s.s.

1. ATHORACOPHORUS BITENTACULATUS (Quoy & Gaimard).

Limax bitentaculatus, Quoy & Gaim.: Voy. Astrolabe, Zool. vol. ii (1832), p. 149; Atlas, Moll. pl. xiii, figs. 1–3.
Janella maculata, Collinge, Proc. Zool. Soc., 1894, p. 527.

For all other references, see Journ. de Conch., vol xli (1893), p. 234.

Among some specimens of *Athoracophorus*, which I sent to Mr. Collinge as *A. bitentaculatus*, he found two differing from the rest in being much flatter, of dirty yellow ground-colour and with numerous black spots and dashes, and these he described as a new species, *Janella maculata*, giving a good account and figures of its anatomy. There is, however, not the least doubt but that the specimens I collected in the Forty Mile Bush, and of which I sent some to Mr. Collinge, consisted of *A. bitentaculatus* and *A. antipodarum*, at that time considered to be one species. Collinge, however, has shown that the two are quite distinct, and herein lies the great merit of his investigation. It is evident that the specimens referred by him to *Janella maculata* are in fact *Athoracophorus bitentaculatus* (Quoy & Gaim.). The authors distinctly mention[1] that their species has brown spots: "La couleur de ce mollusque est d'un jaunâtre sale tacheté de brun clair."



Athoracophorus bitentaculatus (Quoy & Gaim.).
I. Central tooth of radula. II. Sixth lateral tooth of radula.
Both × 720.

I have dissected a number of what I consider to be typical *A. bitentaculatus*, and found them to agree with Collinge's new species.

The mantle-area is not defined, and is bordered, in front only, by a lateral groove, which runs down to the anal orifice; sometimes a fine line is found outside the pulmonary orifice parallel to the median dorsal groove, but there is no posterior limitation. In front of the pulmonary orifice is a small triangular area of lighter colour, with the renal orifice, in the median dorsal groove; this was taken for the anal opening by Knight, and for a mucous pore by Captain Hutton. The outflow and distribution of the renal secretion over the whole back of the slug were well described by Knight.[2]

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[1] Voy. Astrolabe, Zool. vol. ii, p. 148.
[2] Trans. Linn. Soc., vol. xxii, p. 381.

The exact dimensions of a medium-sized spirit specimen are:—

1. Length over back from head to tip of tail, 33 mm.
2. Length of sole, 31 mm.
3. Width of back, 10 mm.
4. Breadth of sole, 3·5 mm.
5. Breadth of groove between sole and back, 2·5 mm.
6. Distance of anus from right tentacle, 6 mm.
7. Distance of anus from pulmonary orifice, 5 mm.
8. Distance of pulmonary orifice from head, 8 mm.

Median dorsal groove continued to the head. Anal opening close to foot margin. Genital opening close behind the right tentacle. Young specimens found near Auckland had only an oval space round the pulmonary orifice, coloured dirty yellow; the others lacked pigmentation, being semi-transparent, whilst some of the internal organs could easily be distinguished. In alcohol they became opaque like other specimens.

A. bitentaculatus is the most common species of the genus, and is more abundant in the North Island than in the South, where *A. papillatus* partially takes its place. It is said to occur also on the Chatham Islands, but I have not seen any specimens from that locality.

2. ATHORACOPHORUS ANTIPODUM (Gray, *em.*).

Janella antipodarum, Gray: Ann. Mag. Nat. Hist., vol. xii (1853), p. 414; and Proc. Zool. Soc., 1853, p. 112.
A. bitentaculatus, *auct.*, *non* Quoy & Gaimard.

The back is more rounded than in *A. bitentaculatus*, the colour brighter, and spots or dashes of brown or black are entirely absent. Its generative system was described and figured by Collinge[1] under the name of *Janella bitentaculata*, showing that *Athoracophorus antipodarum* is really distinct.

Gray does not give any special description of the species, but bases on it the diagnosis of his genus *Janella*. Cockerell, on examining the type-specimen in the British Museum, made it a *form* of *A. bitentaculatus*, saying "the variety differs from the type in being without spots."[2] This evidence shows that Collinge's *Janella bitentaculata* is really *Athoracophorus antipodarum*, and that his *Janella maculata* must be *Athoracophorus bitentaculatus*. There is only one other species of the section *Athoracophorus*, *A. dubius*, which has the same colour-markings as *A. bitentaculatus*. It differs from the latter, however, in several points, as will be shown further on.

A. antipodarum is distinguished from *A. bitentaculatus* by the absence of darker spots, the more highly rounded back, the long

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[1] Proc. Zool. Soc., 1894, pp. 528, 529.
[2] Proc. Zool. Soc., 1891, p. 217.

tube-like position of the free oviduct, the much shorter penis, sharply distinct from the *vas deferens* (Collinge). The dentition shows no difference of any importance. Gray mistook the anus for the orifice of the reproductive organs, a mistake already corrected by Captain Hutton and P. Fischer, and does not say where he considers the anus to be situated. The dimensions and the openings of the different organs are almost the same as in *A. bitentaculatus*.

This species is rather rare, and I have not seen it from any other locality than the Forty Mile Bush, North Island, and Capleston, South Island.

3. Athoracophorus dubius (Cockerell).

Neojanella dubia, Cockerell: Proc. Zool. Soc., 1891, p. 217.
A. bitentaculatus, Suter, *non* Quoy & Gaimard.

The genus *Neojanella* was founded by Cockerell on the absence of a mantle-area and dorsal grooves. The former condition is common to the two species already mentioned, whilst the absence of dorsal grooves in a single spirit specimen is no proof that they are also absent in others. Heynemann has already pointed out[1] that the visibility of the dorsal grooves in Athoracophoridæ is dependent on the degree of contraction of the epidermis. I have many times had reason to confirm Heynemann's statement; it entirely depends on the mode of preservation whether the grooves will be very distinct or the reverse.

The specimen in the British Museum forming Cockerell's type is from the south side of Cook Strait, exact locality not stated. Judging from the description published by Cockerell, I took his *Neojanella dubia* to be only a large specimen of *Athoracophorus bitentaculatus*.[2] I have, however, been able to procure specimens of what I take to be his species from Pelorus Valley, also south side of Cook Strait, and the following data will help to show that it is distinct from *A. bitentaculatus* and a valid species.

The colour-markings are the same as in *A. bitentaculatus*, usually with two darker bands on each side of the back; but the body is more elongate and more highly rounded, the dorsal grooves are finer; a black ring round the respiratory orifice is not always present; the median dorsal groove extends to the head. The movements of the animal are much brisker than in any other species I have seen, and when fully extended the body seems to be almost cylindrical. In specimens I preserved in alcohol, and in formalin, the dorsal grooves are always visible, as well as the fine granulation. What Cockerell took for the genital orifice is the anus. The openings of the different organs are in the same positions as in the two foregoing species. My specimens are not so large as the one described by Cockerell, which has a length (in spirit) of 53 and breadth of 11 mm. It very much depends on the locality whether our native slugs attain a large size or not, a fact I have often had the opportunity of observing: the season also exercises some influence. My specimens were collected during winter and in the early spring. One living specimen measured 35 mm. in length by 5 mm. in breadth.

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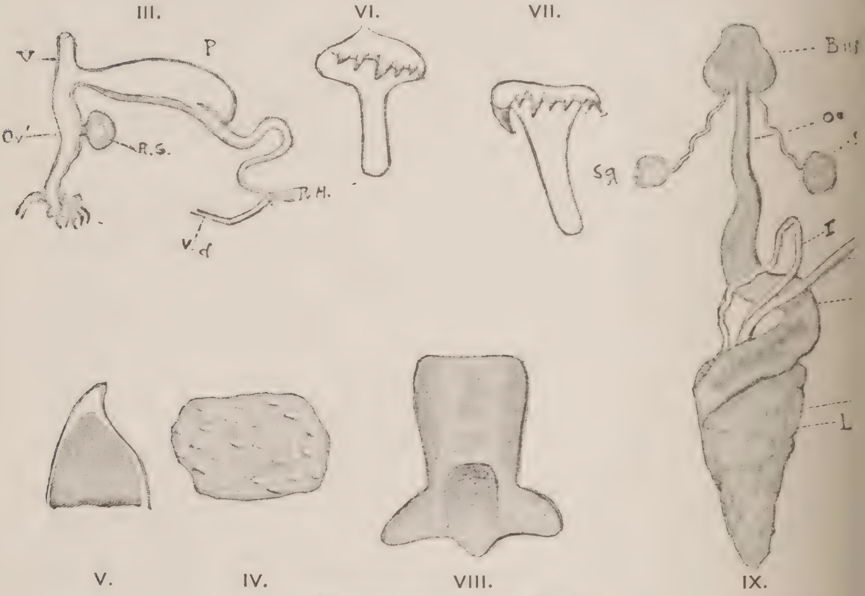
[1] Jahrbuch Deutsch. malak. Ges., 1874, p. 196.
[2] Trans. New Zealand Inst., vol. xxvi, p. 125, etc.

The dimensions of a good-sized spirit specimen are :—

1. Length over back from head to tip of tail, 33 mm.
2. Length of sole, 31 mm.
3. Width of back, 15 mm.
4. Breadth of sole, 5 mm.
5. Breadth of groove between sole and back, 2·5 mm.
6. Distance of anus from right tentacle, 6·5 mm.
7. Distance of anus from pulmonary orifice, 5 mm.
8. Distance of pulmonary orifice from head, 11 mm.



Athoracophorus dubius (Ckll.).

III. Anterior portion of genitalia: magnified. IV. Internal wall of penis, showing papillæ: magnified. V. Papillæ of penis wall: greatly magnified. VI. Centra tooth of radula, × 720. VII. Sixth tooth of radula, × 720. VIII. Jaw × 15. IX. Digestive system, enlarged.

LETTERING OF THE FIGURES.

alb.gl.	albumen gland.	v.d.	vas deferens.
h.d.	hermaphrodite duct.	B.m.	buccal mass.
h.gl.	hermaphrodite gland.	s.g.	salivary glands.
ov.	oviduct.	œ.	œsophagus.
ov'.	free oviduct.	c.	crop.
pr.	prostate.	St.	position of stomach.
p.	penis.	L.	liver.
r.m.	retractor muscle.	I.	intestine.
r.s.	receptaculum seminis.	R.	rectum.
v.	vestibule.		

The reproductive organs are distinguished from those of the two foregoing species as follows:—The penis (Fig. III) is about as long as in *A. bitentaculata*; its anterior portion is rather wide, but at about the middle it suddenly contracts, the slender second half being convolute with the retractor muscle. The size of the hermaphrodite gland, which is about twice that of those in the other two species, is especially noteworthy. The interior wall of the penis is covered with thorn-shaped papillæ (Figs. IV, V), very much like those described and figured by Bergh from *Triboniophorus Schuettei*.[1] I found similar papillæ present in the penis of *Athoracophorus bitentaculatus*.

Radula.—The rhachidian tooth (Fig. VI) is unsymmetrical, pointed in front, with six, sometimes seven, cusps, of which the median is the largest. The lateral teeth (Fig. VII) have eight cusps, the inner one being the largest. There is a considerable difference between the dentition of this species and that of *A. bitentaculatus*, the figures of two teeth (Figs. I, II) being given here for comparison. The jaw (Fig. VIII) is much the same as in the two species already enumerated, and there seems to be no chance of relying on it as a means for distinguishing the species, as often may be done in *Succinea*.

The digestive system (Fig. IX) does not differ much from that of the two other species. The crop is wide and long, extending to the liver, with no trace of a diverticulum; the stomach lies between the folds of the liver and the intestine, and forms a long anterior loop, returning to the liver, whence the rectum emerges.

Hab.—Pelorus Valley, Marlborough, South Island.

Sect. II. PSEUDANEITEA, Cockerell.

Cockerell, Proc. Zool. Soc., 1891, p. 217.

"Small slugs of New Zealand and the Auckland Is., resembling *Athoracophorus*, but showing a decided tendency towards the formation of a mantle-area like that of *Aneitea*. The *Janella papillata* of Hutton may be taken as the type."—*Cockerell.*

These slugs are not always small. Back usually finely granulate with larger raised tubercles or papillæ between the oblique grooves. Mantle-area distinct, triangular or quandrangular, enclosing the respiratory orifice. Anus below the latter and near the foot margin.

4. ATHORACOPHORUS PAPILLATUS (Hutton).

Janella papillata, Hutton: Trans. New Zealand Inst., vol. xi (1879), p. 332.

Athoracophorus verrucosus, Mts.: Simroth, Nova Acta Acad. Cæs. Leop. Carol., Bd. liv, p. 77, pl. iv, figs. 11–14.

For further references see Journ. de Conch., vol. xli, p. 235.

After carefully comparing Dr. Simroth's description and figures with my specimens, I am convinced that *A. verrucosus* is identical with

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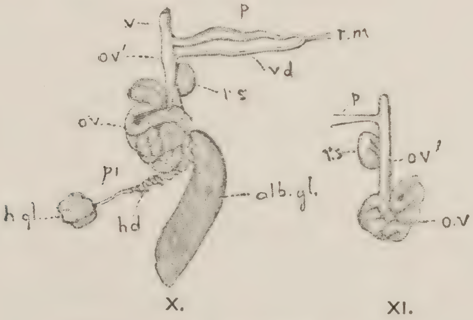
[1] Verhand. k. k. zool. bot. Ges. Wien, Bd. xx (1870), p. 853, pl. xiii, figs. 2–9.

A. papillatus. By way of addition to Simroth's description it may be mentioned that the colour of the back is yellowish-olive without spots; the sole being of a light-yellowish colour, and that fine granules cover the whole of the back, while in each lateral area there are from one to three larger papillæ of the same colour. The median dorsal groove extends to the head. The mantle area is darker, mostly triangular, with the respiratory orifice nearly central. There is no area for the renal orifice, which is situated in the anterior left angle. The size of this species varies according to the locality. From the North Island I have seen only small specimens, but on the South Island large specimens occur.

The dimensions of a large spirit specimen are:—

1. Length over back from head to tip of tail, 60 mm.
2. Length of sole, 55 mm.
3. Width of back, 23 mm.
4. Breadth of sole, 10 mm.
5. Breadth of groove between sole and back, 4 mm.
6. Distance of anus from right tentacle, 10 mm.
7. Distance of anus from pulmonary orifice, 8 mm.
8. Distance of pulmonary orifice from head, 15 mm.

The reproductive organs (Figs. X, XI) agree with Dr. Simroth's description and figure of *A. verrucosus.* I dissected five specimens, and these organs were alike in all. The interior wall of the penis is densely beset with conical papillæ.



Athoracophorus papillatus (Hutton).

X. Genitalia: nat. size. XI. Anterior portion: magnified.
[For lettering, see ante, p. 250.]

The digestive system is normal, the crop very large, without diverticulum, the anterior loop of the intestine extending as far as the œsophagus.

Simroth concluded from the contents of the crop that these animals fed on ferns.[1] In a short note[2] I expressed doubts as to the correctness of this suggestion. I have had specimens of *Athoracophorus* in

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[1] t.c., p. 80.

[2] Journ. de Conch., vol. xl, p. 255.

captivity several times, but they would never touch a fern. The favourite hiding-place of Athoracophoridæ in New Zealand is beneath and within rotten logs and in the leaf-sheaths of *Phormium*, at the base of which plant there is always a large amount of moist, decaying vegetable matter. Examining the contents of the crop of *A. papillatus* found under a rotten log, I found it to consist of a pulp of the rotten wood. I never saw these molluscs feeding, since they are nocturnal, but I do not doubt that the majority of these slugs live on decaying vegetable matter, with which fungi, etc., are always largely mixed.

Hab.—North Island: Forty Mile Bush, small specimens only. South Island: Dunedin, Ashburton, Riccarton Bush, Pelorus Valley. Chatham Islands. Auckland Islands (Krone).

Var. *nigricans*, Martens, 1889.

Simroth, Nova Acta, etc., Bd. liv, p. 77.

This variety seems to be very rare. The original locality is Auckland Islands, but I have specimens from Dunedin and Pelorus Valley, South Island.

Var. *fasciata*, Von Martens, 1889, *em.* (*fuscata*).

Simroth, t.c., p. 79.

This is a more common form, which, however, I have not seen from the North Island. The arrangement of the dark-brown or black spots on the back is very variable, but usually they form three bands. It is sometimes as large as the typical form, but generally smaller.

Hab.—Auckland Islands; South Island; Dunedin; Hooker Valley; Pelorus Valley.

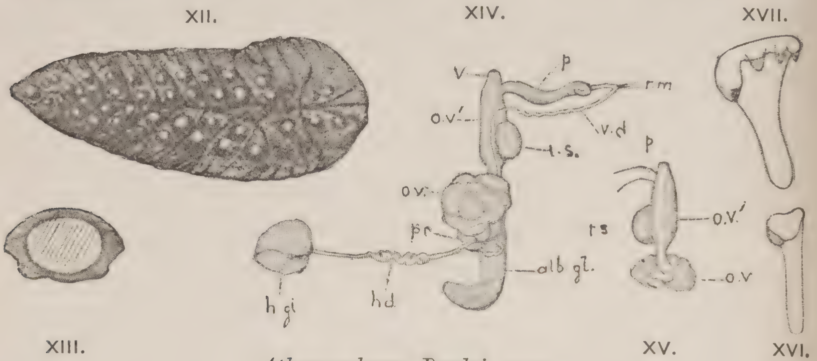
5. ATHORACOPHORUS SIMROTHI, Suter.

Athoracophorus Simrothi, Suter: Proc. Malac. Soc. London, Vol. ii (1896), p. 34, pl. iv, figs. 3, 4.

I have been unable to procure any more specimens of this interesting slug, and hence cannot add anything by way of supplement to my first communication.

6. ATHORACOPHORUS DENDYI, n.sp.

Body (Figs. XII, XIII) broadly elongate, anterior part very broad, narrowing gradually towards the tail. Back flatly rounded, with median and lateral grooves deep and conspicuous, median groove extending to the head, lateral grooves with one or two additional grooves near the margin. Colour dark-grey, darker along the middle. The whole of the back minutely granulate, between the oblique grooves one or two large raised round tubercles of much lighter colour, forming a single row on each side from the mantle-area to the head, double from the mantle-area to a short distance from the tail. Mantle-area triangular, sometimes quadrangular, granulose; the pulmonary orifice in the middle near the right side, renal opening in the anterior angle, both orifices of a lighter colour. Anus below and a little in front of the respiratory orifice, near the foot margin. Foot with lateral grooves of yellowish-white colour; sole broad, smooth, with a lighter median band. Distinct grooves between sole and back, showing distinctly the continuance of the dorsal oblique grooves. A thread-like line runs the whole length between sole and lateral groove. (Spirit specimen.)



Athoracophorus Dendyi, n.sp.

XII. The animal; spirit specimen: nat. size. XIII. Transverse section of body. XIV. Genitalia: nat. size. XV. Genitalia, anterior portion magnified. XVI. Central tooth of radula, × 720. XVII. Sixth lateral tooth of radula, × 720.

[For lettering, see ante, p. 250.]

The dimensions of a good-sized example are :—

1. Length over back from head to tail, 50 mm.
2. Length of sole, 40 mm.
3. Width of back, 23 mm.
4. Breadth of sole, 11 mm.
5. Breadth of groove between sole and back, 4 mm.
6. Distance of anus from right tentacle, 12 mm.
7. Distance of anus from pulmonary orifice, 9 mm.
8. Distance of anus from foot margin, 2·5 mm.
9. Distance of pulmonary orifice from head, 18 mm.

The reproductive organs (Figs. XIV, XV), which open close behind the right tentacle, are very much on the same plan as those of *A. papillatus*, but the following characters may be considered as of specific distinction. The free and rather large cylindrical oviduct is greatly dilated, and has the receptaculum seminis inserted at its posterior part. The penis is about the same shape as in *A. papillatus*, but somewhat longer and distally convolute. The hermaphrodite gland is larger and its duct longer than in *A. papillatus*. The interior wall of the penis is densely covered with oval papillæ, which sometimes terminate in a small sharp point.

The digestive system does not show any marked difference from that of *A. papillatus*; there is no diverticulum on the crop, and the jaw is

almost the same. The teeth of the radula (Figs. XVI, XVII), however, are very different. The rhachidian tooth is very slender, with a small irregularly-shaped cusp, bearing a single blunt denticle, usually on the left side, whilst the lateral teeth have a long and stout inner denticle and three, smaller, outer ones.

I have much pleasure in associating with this species the name of its discoverer, Dr. Arthur Dendy, Professor of Biology in the Canterbury College, University of New Zealand.

Type in my collection.

Hab.—Springburn, Mt. Somers; South Island (Dr. Dendy).

Sect. III. KONOPHORA, Hutton.

Hutton, Trans. New Zealand Inst., vol. xi (1879), p. 332.

Like *Janella*, but the eye-peduncles short and conical (Hutton). Back of body smooth, or faintly granulose. In spirit specimens the lateral grooves on the foot are present, but not very conspicuous, and there is no thread-like line between groove and sole. Mantle-area distinct, triangular, sometimes quadrangular. The median dorsal groove not always extending to the head. Renal opening a short distance in front of the mantle-area. Anus below the pulmonary orifice, near the foot margin.

7. ATHORACOPHORUS MARMOREUS (Hutton).

Konophora marmorea, Hutton: Trans. New Zealand Inst., vol. xi (1879), p. 332; vol. xiv, p. 158, pl. v, figs. 1–9.

A full description of this species and its anatomy has been given by Captain Hutton. The rhachidian tooth of the radula is very distinct, somewhat approaching that of *A. papillatus* in the emarginate anterior end, but there is no central denticle. The situation of the renal opening *in front of the mantle-area* is not met with in any other species, and is correctly reproduced in the figure given by Captain Hutton.[1]

This species attains a rather large size. The dorsal grooves in spirit specimens are sometimes very indistinct, and the back quite smooth.

The dimensions of a rather small specimen are:—

1. Length over back from head to tip of tail, 55 mm.
2. Length of sole, 45 mm.
3. Width of back, 21 mm.
4. Breadth of sole, 8 mm.
5. Breadth of groove between sole and back, 3 mm.
6. Distance of anus from right tentacle, 8 mm.
7. Distance of anus from pulmonary orifice, 9 mm.
8. Distance of anus from foot margin, 2·5 mm.
9. Distance of pulmonary orifice from head, 16 mm.

The genital orifice is close behind the right tentacle.

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[1] t.c., pl. v, fig. 1*e* (mucous pore).

Hab.—South Island: Dunedin; Greymouth; Pelorus Valley.

This is one of our rare species.

Cockerell's *A. marmoreus*, forma nov., from Dunedin,[1] is undoubtedly *A. papillatus* var. *fasciata.* "Depressed raised tubercles" are not met with in *Konophora.*

Subgen. AMPHIKONOPHORA, n. subg.

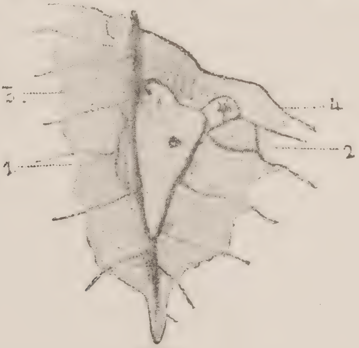
Large slugs with well-marked dorsal grooves. Mantle-area distinct, triangular, with the renal opening inside its anterior angle and the pulmonary orifice subcentral, nearer the right side. *Anus close to the outer angle of mantle-area.* The whole back finely granulate.

This is no doubt the most interesting group of *Athoracophorus.* It is unique in the situation of the anus close to the mantle-area, approaching thus the genus *Aneitea,* from which, however, it is distinct, especially in the absence of a diverticulum on the crop, the presence of a renal duct, the form of the teeth of the radula, etc.

8. ATHORACOPHORUS MARMORATUS, Simroth.

Athoracophorus marmoratus (Mts. MS.), Simroth: Nova Acta Acad. Cæs. Leop. Carol., Bd. liv (1889), p. 71, pl. iv, figs. 3–10.
A. marmoreus, Suter, *non* Hutton.

It is not very long since I obtained a specimen of this rare slug, which agrees perfectly with the description and figures published by Dr. Simroth. In Fig. XVIII the situation of the anus close to the mantle-area, so characteristic of the species, is illustrated. Dr. Simroth's specimen was a very small one, 20 mm., but it may well be that these slugs do not attain a much larger size on the Auckland Islands. The



XVIII.

Athoracophorus marmoratus, Simroth.

XVIII. Portion of back with mantle-area: enlarged.

1. Mantle-area.
2. Pulmonary orifice.
3. Renal orifice.
4. Anus.

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[1] Proc. Zool. Soc., 1891, p. 217.

specimen in my collection is 90 mm. long, foot 10 mm. broad, and was found on a birch-tree near Collingwood. It is thus evident that this species, in a genial, moist climate, attains to the largest size of all our native slugs.

Hab.—Auckland Islands (Krone); Collingwood, South Island.

Conclusion.—The geographical distribution of the species is not without interest. The North Island has only small, not much differentiated forms—*A. bitentaculatus*, *A. antipodarum*, and small forms of *A. papillatus*; whilst in the South Island, large, more differentiated, and generally darker-coloured species occur. Of the eight species all are found on the South Island, but the larger forms prevail, especially *A. papillatus*. Two species occur as far south as the Auckland Islands. We know nothing of any native slugs and very little about the other land mollusca from Stewart Island. There is no reason why *Athoracophorus* should not exist on this latter island, and it is even probable that new species may be found on it some day.

Like the unfortunately extinct Moa, *Athoracophorus* attains its greatest development and differentiation on the South Island. The comparison may seem somewhat peculiar, but it is quite in accordance with the facts.

The genus *Athoracophorus* is restricted to New Zealand, including the Chatham and Auckland Islands. The two other genera of the family are found: *Aneitea*, Gray, in East to North Australia, New Caledonia, and New Hebrides; ? *Aneitella*, Cockerell, on Wild Island, Admiralty Archipelago. The occurrence of members of the family in New Guinea is to my knowledge not quite certain yet, but they seem to be absent from the Kermadec, Norfolk, and Lord Howe Islands.

Mr. C. Hedley included *Hyalimax*, H. & A. Ad., in the family,[1] but according to Dr. Simroth this genus is much nearer the Succineidæ and has nothing whatever to do with the Athoracophoridæ.

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[1] Trans. New Zealand Inst., vol. xxv, p. 161.

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THE LAND MOLLUSCA OF STEWART ISLAND.

By Henry Suter.

Read 9th April, 1897.

In March of this year Mr. Aug. Hamilton, of Dunedin, paid a short visit to Halfmoon Bay, Stewart Island, when he collected a number of land-shells, which he kindly sent me for investigation.

Hitherto only four species of land-shells have been known from this island, viz.:

1. *Flammulina* (*Phacussa*) *fulminata*, Hutton;
2. *Flammulina* (*Pyrrha*) *cressida*, Hutton;
3. *Laoma* (*Phrixgnathus*) *celia*, Hutton;
4. *Rhytida australis*, Hutton;

of which the first and last mentioned are endemic.

Mr. Hamilton's collection comprised the following species:—

1. *Flammulina perdita*, Hutt. One dead and partly broken shell. This species is found over the whole of New Zealand, but is a rather rare shell.

2. *Flammulina Feredayi*, Suter. Two specimens, which correspond exactly with my type-specimen from the Forty Mile Bush, North Island. The species has also been found on the Hunua Range and in the Otaki Gorge, North Island. The var. *glacialis* I established on specimens found in the Hooker Valley, South Island.

3. *Flammulina* (*Phenacohelix*) ~~*granum*, Pfr.~~ pilula, Rv Two specimens, which are not adult, having only four whorls and a diameter of 2·5 mm., but otherwise differing in no respect from specimens I have from the North Island. I have not seen it yet from the South Island. This is one of our very rare shells.

4. *Flammulina* (*Phacussa*) *fulminata*, Hutt. Five specimens, mostly bleached. Two of them exceed the dimensions given by Captain Hutton for this species.

5. *Flammulina* (*Thalassohelix*) *igniflua*, Reeve, var. *obnubila*, Reeve. Eight specimens, bleached. They are much smaller than the typical *F. igniflua*, with diam. 7, alt. 4·5 mm., whorls 4½. I found similar living specimens near Dunedin, and hence I think it advisable to follow Pilsbry (Man. Conch., ser. II, vol. ix, p. 13), and to distinguish them as var. *obnubila*, although they differ from the type only in size. I have not seen this variety from any other part of New Zealand.

6. *Endodonta* (*Charopa*) *bianca*, Hutt. Two specimens only, which do not differ from the typical form. Occurring over the whole of New Zealand.

7. *Endodonta* (*Charopa*) *tapirina*, Hutt. One young specimen, in the colour-markings resembling specimens from Otago.

8. *Endodonta* (*Charopa*) *Sterkiana*, Sut., var. *Reeftonensis*, Sut. Five specimens, slightly larger than the type, but otherwise not distinguishable from it. This variety is very probably distributed over a great part of the South Island, since it has been found at Greymouth and Springburn; but it seems nowhere to be common.

9. *Laoma* (*Phrixgnathus*) *celia*, Hutt. Six specimens, typical.

10. *Laoma* (*Phrixgnathus*) *phrynia*, Hutt., var. *major*, n. var. Fourteen specimens of this new variety were found. They differ from the type principally in their much larger size, the diameter being 3·5 mm., as against 2·5; the periostracum is almost smooth, but the rather distinct radiate riblets are clearly visible near the suture, only rarely extending thread-like over the surface of the whorl to the periphery. The colour is darker than in most specimens of the type-form.

11. *Rhytida australis*, Hutt. Three bleached and broken shells.

Our knowledge of the land-molluscan fauna of Stewart Island has thus made some progress, eleven instead of only four species being now known. There is no doubt that a thorough exploration of this island would reveal many more species, and very likely several new forms.

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REVISION OF THE NEW ZEALAND TROCHIDÆ.

By Henry Suter.

Read 14th May, 1897.

Fam. TROCHIDÆ.

Subfam. Trochinæ.

Genus. TROCHUS, Linné, 1758.

Subgen. Infundibulum, Montfort, 1810.

Sect. cœlotrochus, Fischer, 1880.

1. Trochus tiaratus, Quoy & Gaimard.

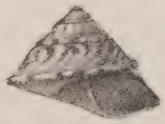
Trochus tiaratus, Quoy & Gaim. : Voy. Astrolabe, Zool. vol. iii (1834), p. 256, pl. lxiv, figs. 6–11 ; Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 358 ; Pilsbry, Man. Conch., ser. i, vol. xi, p. 42, pl. xii, figs. 72–4 ; pl. l, fig. 4 (radula).
Anthora tiarata (Quoy & Gaim.) : Hutton, Man. New Zealand Moll., p. 94 ; Hutton, Trans. New Zealand Inst., vol. xiv, p. 165, pl. vii, fig. N (radula).
Trochus delicatulus, Philippi : Zeitsch. Malak., 1846, p. 105.
Polydonta elegans, Gray : Yates' "New Zealand," 1835, p. 309.

Five to five and a half whorls; 5–8 spiral liræ of oblique beads on the penultimate whorl. Columella with an obsolete fold above. Umbilical area smooth. Alt. 10, diam. 13·5 mm.

Hab.—On rocks near low-water mark from Auckland to Dunedin; common in the North, rare in the South Island.

2. Trochus Chathamensis (Hutton).

Polydonta Chathamensis, Hutton : Cat. Mar. Moll. New Zealand, 1873, p. 36.
Anthora Chathamensis, Hutton : Man. New Zealand Moll., 1880, p. 94.
Trochus Chathamensis, Hutton : Proc. Linn. Soc. New South Wales, vol. ix, p. 359 ; Pilsbry, Man. Conch., ser. i, vol. xi, p. 43.



Trochus Chathamensis (Hutton).

Six whorls, with 5–6 close, low, spiral cinguli between the upper and lower margins, which are strongly elevated. Upper edge of whorls nodulous, lower edge spirally striate and as a rule more prominent than the upper one. Longitudinal oblique markings of brownish-purple on a white ground. Columella with almost imperceptible fold above. False umbilicus almost filled up, smooth. Alt. 7·5, diam. 9 mm.

Hab.—Chatham Is. only.

The specimens reported by Mr. T. W. Kirk as having been found near Wellington very likely do not belong to this species, but to *T. oppressus*, Hutton.

3. Trochus oppressus (Hutton).

Gibbula oppressa, Hutton: Journ. de Conch., 1878, p. 34; Man. New Zealand Moll., 1889, p. 102; Proc. Linn. Soc. New South Wales, vol ix, p. 364; Trans. New Zealand Inst., vol. xv, p. 124, pl. xiv, fig. M (radula); Pilsbry, Man. Conch., ser. I, vol. xi, p. 232, pl. xl, figs. 4, 5.

Dark olive-brown, tessellated with darker markings. Beach specimens, having lost the periostracum, are white with fuscous markings Whorls keeled above the middle. Body-whorl biangular. Entire surface closely, finely, spirally striate. Columella oblique, straight, inserted in centre of base. Alt. 5·5, diam. 6 mm.

The presence of a false umbilicus, quite exceptional in *Gibbula*, led me to re-examine the radula. I found the teeth to correspond with Hutton's description and figure, but the point of great importance is the absence of a jaw. It therefore cannot belong to the genus *Gibbula*, and its proper place is no doubt under *Trochus*.

Hab.—Under stones near low-water mark, scarce, Auckland, Lyall Bay.

Var. *Dunedinensis*, n.var.

Differs from the type in being larger and in the body-whorl being only faintly angular; the colour is rather darker, but the markings are the same. Whorls 5½, protoconch minute, distantly spirally striated. Spire-whorls not keeled in the middle or above it, but slightly convex, nodulous below the suture, with a well-developed cingulus above the nodules; 6–7 cinguli on the penultimate whorl. On the last whorl and the base the cinguli are crossed by very fine and dense lines of growth. In some specimens the cinguli of the base, 8–9, are coarser near the axis, in others they are of nearly equal size. Radula the same as in the type; no jaw. Alt. 7·5, diam. 7·5 mm.

Hab.—Dunedin Harbour, under stones; only a few specimens (H. S.).

Sect. ANTHORA, Gray, 1857.

4. Trochus viridis, Gmelin.

Trochus viridis, Gmel.: Syst. Nat., 13th ed. (1788), p. 3572, No. 34; Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 358; Pilsbry, Man. Conch., ser. I, vol. xi, p. 43, pl. iii, figs. 16, 17, and vol. x, pl. xl, fig. 21.

Anthora viridis (Gmel.): Hutton, Man. New Zealand Moll., p. 94.

Polydonta tuberculata, Gray: Dieffenbach's "New Zealand," vol. ii, p. 239.

Anthora tuberculata (Gray): Hutton, Trans. New Zealand Inst., vol. xv, p. 124, pl. xiv, fig. K (radula); Hutton, Man. New Zealand Moll., p. 93.

Trochus acinosus, Gould: U.S. Explor. Exped., Moll. p. 179, fig. 217.
Trochus fulvolabris, Hombr. & Jacq.: Voy. Pole Sud, Zool. vol. v, p. 56, pl. xiv, figs. 14–16.
Polydonta tritonis, A. Adams: Proc. Zool. Soc., 1854, p. 132.
Anthora tritonis (A. Ad.): Hutton, Man. New Zealand Moll., p. 94.

Seven whorls; five series of granulated spiral liræ on penultimate whorl. Columella with a deep fold above. Umbilical area with 3–4 spiral ribs. Alt. 20, diam. 19 mm.

Hab.—On rocky ground near low-water mark from Whangarei to Dunedin. Rather rare in the North, but attaining a larger size.

Subgen. Clanculus, Montfort, 1810.

5. Trochus ringens (Menke).

Monodonta ringens, Menke: Moll. Nov. Holl. Spec., 1843, p. 14, No 53 (not *M. ringens*, Philippi, 1846).
Trochus ringens (Menke): Philippi, Conch. Cab., p. 235, pl. xxxvi, fig. 1; Fischer, Coq. Viv., p. 213, pl. lxxi, fig. 1; Pilsbry, Man. Conch., ser. i, vol. xi, p. 81, pl. xi, figs. 49, 50.

Shell perforate, conical; whorls 7, the first smooth, yellowish, following planulate, separated by canaliculate sutures, maculate with chestnut and white, spirally cingulate above with four elegantly granulate ridges, the upper and lower larger, last whorl acutely carinated; base slightly convex, ornamented with 8–9 granose cinguli; aperture rhomboidal, oblique, narrow; basal margin sulcate-denticulate; columella strong, oblique, terminating below in a large tooth, ringent above; columella callous, ringent, plicate. Alt. 10, diam. 11 mm. (Fischer). Sometimes the altitude exceeds the diameter.

My specimen from Mokohinau Island, which agrees in every respect with Fischer's excellent description, measures 12 × 10·5 mm.

Hab.—Cape Maria van Diemen (C. H. Robson); Mokohinau I. (caretaker of the lighthouse).

This is a new addition to the fauna of New Zealand. In Hutton's Man. New Zealand Moll. *Clanculus variegatus*, Adams, is mentioned, loc. Auckland (?), but in his revision (1884) it is omitted from the list of New Zealand mollusca. Whether *Trochus ringens* was erroneously taken for *T. variegatus* or not, I do not know.

Genus MONODONTA, Lamarck, 1801.

Subgen. Diloma, Philippi, 1845.

Sect. neodiloma, Fischer, 1885.

6. Monodonta Æthiops (Gmelin).

Trochus Æthiops, Gmelin: Syst. Nat., 13th ed., p. 3596, No. 32.
Trochus Zealandicus, Quoy & Gaim.: Voy. Astrolabe, Zool. vol. iii, p. 257, pl. lxiv, figs. 12–15.

Monodonta reticularis, Gray: Dieffenbach's "New Zealand," vol. ii, p. 238.
? *Labio concolor*, A. Adams: Proc. Zool. Soc., 1851, p. 180.
Diloma Æthiops (Gmel.): Hutton, Man. New Zealand Moll., p. 95; Hutton, Trans. New Zealand Inst., vol. xv, p. 125, pl. xv, fig. A (radula).
Monodonta Æthiops (Gmel.): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 365; Pilsbry, Man. Conch., ser. I, vol. xi, p. 98, pl. xix, figs. 99–100; pl. xx, fig. 19; pl. l, fig. 12 (radula).

With distant narrow spiral black grooves, the intervening tracts flat, black, articulated with white. Outer lip black-edged. Umbilical tract very broad, bounded on the outer, lower margin by a chocolate streak. Alt. 25–33, diam. 25–30 mm.

Hab.—On rocks near high-water mark; common throughout New Zealand, Chatham Is., Auckland Is.

7. MONODONTA MORIO (Troschel).

Trochus morio, Troschel in Philippi: Conch. Cab., p. 142, pl. xxiv, fig. 3.
Monodonta melaloma var. *guttata*, Hutton: Proc. Linn. Soc. New South Wales, vol. ix, p. 367.
Monodonta morio, Trosch.: Pilsbry, Man. Conch., ser. I, vol. xi, pp. 102, 105, pl. xxxv, figs. 26, 27.

Shell black, surface rough, apex almost always eroded, with irregularly scattered white dots, obsoletely spirally sulcate, 9–10 on the penultimate whorl. Umbilical tract broad, with a tongue-shaped pearly umbilical impression, bounded by dark-green. Outer lip edged with blackish-green, followed by a narrow silvery, lirate band, and inside this a broad band of opaque white, the prolongation of the columella lip, follows. Very variable in form. Alt. 12–20, diam. 14–19 mm.

Hab.—On rocks and under stones near low-water mark, from Auckland to Banks' Peninsula.

8. MONODONTA ATROVIRENS (Philippi).

Trochus atrovirens, Philippi: Conch. Cab., p. 148, pl. xxiv, fig. 12; Fischer, Coq. Viv., p. 373, pl. cxiv, fig. 1.
Monodonta atrovirens, Phil.: Pilsbry, Man. Conch., ser. I, vol. xi, p. 110, pl. xxii, figs. 48–50.

Shell orbiculate, conoidal, shining, greenish-black, usually faintly marked with yellowish spots, spirally sulcate, sulci 7–9 on the penultimate whorl. Sutures submargined below. Last whorl much dilated, rounded at the periphery. Outer lip edged with green or blackish-green. Columellar callus broadly expanded, bounded by green or blackish-green, a distinct tongue-shaped pit at the place of the umbilicus. Alt. 9–17, diam. 14–23 mm.

Hab—Tasman's Bay; Lyall Bay; Dunedin. Under stones above low-water mark.

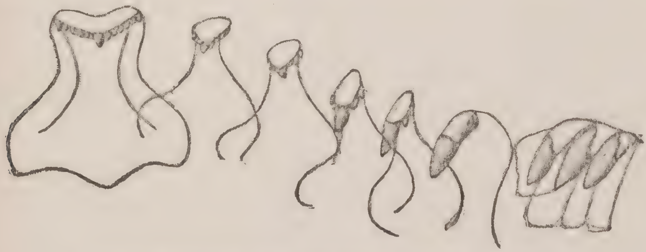
Found mostly with the preceding species, from which it is not always easily separated.

9. MONODONTA PORCIFERA (Watson).

? *Labio porcifera*, A Adams: Proc. Zool. Soc., 1851, p. 179.
Trochus (*Diloma*) *porcifer* (A. Ad.): Watson, Rept. Challenger Exped., Gastropoda, p. 67, pl. iv, fig. 12.
Diloma nigerrima, Chemn.: Hutton, Man. New Zealand Moll., p. 96; ? Hutton, Trans. New Zealand Inst., vol. xv, p. 125, pl. xv, fig. B (radula).
Monodonta nigerrima (Chemn.): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 366 [not *nigerrima* (Gmel.), Philippi].
Monodonta porcifera, Watson: Pilsbry, Man. Conch., ser. I, vol. xi, p. 102, pl. xxii, figs. 53, 54.

Shell depressed, globose, bluish-black, polished, superficially lirate, sometimes sparsely dotted with white. Suture margined below. Outer lip margined with black. Columella not dentate, broad, subconcave. Opaque substance of columella extending upon the base of the aperture, forming a strong ledge within. Alt. 10–13, diam. 13·5–16·5 mm.

My specimens do not show a trace of white spots, but otherwise agree with Watson's description. *Monodonta coracina* also occurs, with and without yellow spots.



Portion of radula of *Monodonta porcifera* (Watson).

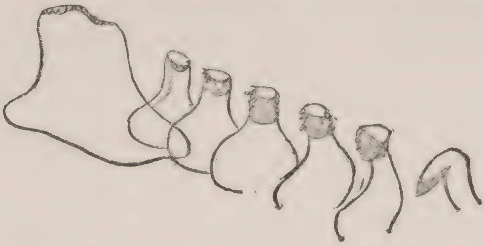
The figures of the teeth of the radula of *Diloma nigerrima* published by Captain Hutton, and quoted above, are very likely those of another species (*Monodonta coracina*?). I therefore give here the figures of the teeth of specimens which I consider to be typical, collected at St. Clair, near Dunedin.

Hab.—The only specimens I have seen and collected on rocks are those from St. Clair, Dunedin. Captain Hutton quotes the following localities: Banks' Peninsula to Dunedin, Chatham Is., Auckland Is.

10. MONODONTA CORACINA (Trosch.).

Trochus coracinus, Troschel in Philippi: Conch. Cab., p. 148, t. xxiv, fig. 13.
Monodonta coracina (Troschel): Pilsbry, Man. Conch., ser. I, vol. xi, p. 103, pl. xix, fig. 94; pl. xxxi, fig. 28.

Shell orbicular-conoid, depressed, lustreless, purplish-black, with or without yellow spots. Suture more or less distinctly margined below. Spiral liræ of whorls distinct or almost obsolete. Last whorl angulate around the periphery; body-whorl sometimes biangulate. Outer lip black-edged, followed by a narrow opaque white band, which runs as a silvery stripe over the umbilical tract parallel to the columella, and unites again with the upper lip, thus forming a complete circle. Umbilical tract bounded on the outer, lower margin by green, grey, or brown. Alt. 10–13, diam. 11–18 mm. A large conic specimen from Lyttelton measures 17 × 17 mm.



Portion of radula of *Monodonta coracina* (Trosch.).

Hab.—Wellington and Lyttelton Harbours, Sumner (H. S.). Under stones on sandy beaches above low-water mark.

11. MONODONTA EXCAVATA (Adams & Angas).

Trochocochlea excavata, Ad. & Ang.: Proc. Zool. Soc., 1864, p. 37; Hutton, Man. New Zealand Moll., p. 97.
Diloma excavata (Adams): Hutton, Trans. New Zealand Inst., vol. xv, p. 126, pl. xv, fig. F (radula).
Monodonta excavata (Ad. & Ang.): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 368; Pilsbry, Man. Conch., ser. I, vol. xi, p. 109, pl. xxxv, figs. 1–3.
Trochocochlea constricta (Lamk.): Hutton, Journ. de Conch., 1878, p. 33. [Not of Lamarck.]

Shell small, depressed-conic, greyish-green, minutely maculated with dark-olive, apex but seldom eroded. Last whorl convex above, flattened beneath, and carinate at the periphery. Liræ distinct only on the base. Outer lip edged with black. Umbilical tract broad, concave, bounded by light-brown. Alt. 5, diam. 6 mm. Specimens from Greymouth measure 10 × 11½ mm.

Hab.—West coast of New Zealand; Manukau Heads; Cape Egmont; Greymouth.

12. MONODONTA LUGUBRIS (Gmelin).

Trochus lugubris, Gmelin; Syst. Nat., 13th ed., p. 3583, No. 104.
Trochus cingulatus, Quoy & Gaim.: Voy. Astrolabe, Zool. vol. iii, p. 259, pl. lxiv, figs. 16–20 (not *cingulatus*, Brocchi nor Menke).

Monodonta angulatum [misprint for *cingulatum*] (Quoy & Gaim.): Gray in Dieffenbach's "New Zealand," vol. ii, p. 238.
Trochus Gaimardi, Philippi: Conch. Cab., p. 211, pl. xxxi, figs. 7–9.
Diloma Gaimardi (Phil.): Hutton, Man. New Zealand Moll., 1880, pp. 96, 201.
Trochus Bernardii, Recluz: Journ. de Conch., 1852, p. 166, pl. vii, fig. 5.
Trochus sulcatus, Wood: Index Test. Suppt., pl. vi, fig. 40.
Monodonta sulcata (Wood): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 367 (not *sulcatus*, Martyn nor Lamarck).
Trochus bicanaliculatus, Dunker in Philippi: Conch. Cab., p. 202, pl. xxx, fig. 6.
Monodonta lugubris, Gmel.: Pilsbry, Man. Conch., ser. I, vol. xi, p. 100, pl. xix, fig. 93; pl. xxxv, figs. 24, 25.

Whorls strongly, spirally ridged, carinate, black, the ridges nodulous and dotted with white or yellow; three on the penultimate whorl, interstices spirally striate. Outer lip black-edged, then nacreous and lined with opaque white. Umbilical tract not very broad, bordered on the outer margin by greyish-white. Alt. 9–13, diam. 13–15 mm.

Hab.—From Auckland to Dunedin, under stones near low-water mark. Not common, but more abundant in Cook Strait than further north or south.

13. MONODONTA SUBROSTRATA, Gray.

Monodonta subrostrata, Gray: Yate's "New Zealand," 1835, p. 308; Dieffenbach's "New Zealand," vol. ii, p. 238.
Trochocochlea subrostrata (Gray): Hutton, Man. New Zealand Moll., 1880, p. 96.
Diloma (?) *subrostrata* (Gray): Hutton, Trans. New Zealand Inst., vol. xv, p. 126, pl. xv, fig. G (dentition).
Monodonta subrostrata (Gray): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 367; Pilsbry, Man. Conch., ser. I, vol. xi, p. 101, pl. xix, figs. 89, 90.

Shell with subnodulose, spiral ribs, which are wider apart on the upper surface and closer on the base. Yellowish with undulating, longitudinal, purple lines. Outer lip edged with yellow and dotted with black, then a narrower band of opaque white; throat lirated, silvery. Umbilical tract rather broad, greyish or yellowish-grey on its outer lower margin. Alt. 11–14, diam. 13–15 mm.

Hab.—Auckland to Tauranga, abundant on *Zostera* beds.

14. MONODONTA (MELANOLOMA, Menke)

Monodonta melanoloma, Menke: Moll. Nov. Holl., 1843, p. 14.
Trochus melanoloma (Menke): Philippi, Conch. Cab., p. 146, pl. xxiv, fig. 9.
Labio corrosa, A. Adams: Proc. Zool. Soc., 1851, p. 180; Hutton, Man. New Zealand Moll., p. 96.

Diloma corrosa (Adams): Hutton, Trans. New Zealand Inst., vol. xv, p. 126, pl. xv, fig. D (radula).
Labio Hectori, Hutton: Cat. Mar. Moll. New Zealand, 1873, p. 37.
Trochocochlea chloropoda, Tate: Zool. and Pal. Misc., p. 10 (*teste* Hutton).
Monodonta melaloma (Menke): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 366.
Monodonta melanoloma, Menke: Pilsbry, Man. Conch., ser. I, vol. xi, p. 104, pl. xxii, figs. 56, 57.

Shell globose, conical, roughened and eroded, purplish, body-whorl mostly yellowish; more or less distinctly lirate. Outer lip yellow-edged, followed by a black band. Columella arcuate, with a small tooth below the middle. Umbilical tract narrow, concave, bounded by dark-grey. Alt. 15, diam. 16 mm.

Hab.—On mud-flats of estuaries in brackish water, Heathcote Estuary, near Christchurch (H. S.).

Var. *undulosa*, A. Adams.

Chlorostoma undulosum, A. Adams: Proc. Zool. Soc., 1851, p. 182. For synonymy, see Pilsbry, Man. Conch , ser. I, vol. xi, p. 105, pl. xxii, figs. 45–7.

Larger than the type, and the spiral striation more distinct; yellowish, with undulating lines of dark-purple. Alt. 18, diam. 20 mm.; alt. 17, diam. 22 mm.

Hab.—Sumner to Dunedin. On rocks: not common.

Var. *plumbea*, Hutton.

Diloma plumbea, Hutton: Trans. New Zealand Inst., vol. xv (1883), p. 126, pl. xv, fig. E (radula).
Monodonta melaloma var. *plumbea*: Proc. Linn. Soc. New South Wales, vol. ix, p. 367; Pilsbry, Man. Conch., ser. I, vol. xi, p. 105, pl. xxii, figs. 45–7.

Shell dull-purplish, spire mostly eroded, roughened, last whorl obsoletely lirate. Outer lip edged with black. Columella and umbilical tract as in the type, the latter sometimes of a greyish-green colour. Alt. 14·5–16, diam. 16–17 mm.

Hab.—Sumner, Lyttelton, Banks' Peninsula to Dunedin. Under stones near low-water mark; rather scarce.

Sect. CHLORODILOMA, Pilsbry, 1889.

15. MONODONTA CRINITA (Philippi).

Trochus crinitus, Philippi: Zeitschr. Malak., 1848, p. 103.
Trochocochlea mimetica, Hutton: Journ. de Conch., 1878, p. 32; Man. New Zealand Moll., p. 96.
Monodonta mimetica, Hutton: Proc. Linn. Soc. New South Wales, vol. ix, p. 368.
Monodonta crinita, Phil.: Pilsbry, Man. Conch., ser. I, vol. xi, p. 111, pl. xxii, figs. 41–4.

Shell globose-conic, narrowly perforate, cinereous, spirally grooved, cinguli dark-purple with white spots at regular distance. Columella not very thick, obtusely dentate below, white-edged. Umbilico-columellar area bright-green with undulating narrow bands of purplish-brown. Alt. 17, diam. 16–18 mm.

The only specimen I have, measures 9 × 12 mm., having 3·5 whorls only; the apex is not eroded, protoconch smooth, dark-orange.

Pilsbry states that it is sometimes imperforate.

Hab.—Auckland, on *Zostera* beds; scarce (T. F. Cheeseman).

Genus CANTHARIDUS, Montfort, 1810.

Subgen. CANTHARIDUS, Montf.

Sect. CANTHARIDUS, s.s.

16. CANTHARIDUS IRIS (Gmelin).

Trochus iris, Gmelin: Syst. Nat., 13th ed., p. 3580, No. 86.
Cantharidus iris (Gmel.): Hutton, Man. New Zealand Moll., p. 99; Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 361.
Cantharidus Zealandicus, A. Adams: Proc. Zool. Soc., 1851, p. 169.
Cantharidus Zealandicus, A. Ad.: Hutton, Man. New Zealand Moll., p. 99.
Cantharidus iris (Gmel.): Pilsbry, Man. Conch., ser. I, vol. xi, p. 122, pl. xxxiv, fig. 15.

Shell elevated, conical, obtusely angular at the periphery, whitish with longitudinally undulating purplish-red streaks; obsoletely lirate, about five separated narrow ridges on the base. The largest species of the genus. Alt. 40, diam. 30 mm.

I follow Hutton in placing Adams' *Cantharidus Zealandicus* as a synonym of this species, Pilsbry taking it as a synonym of *C. pruninus* (Gould), which I do not think to be correct.

Hab.—Auckland to Cook Strait; Chatham Is.

17. CANTHARIDUS PRUNINUS (Gould).

Trochus pruninus, Gould: Proc. Boston Soc. Nat. Hist., vol. iii (1849), p. 90; U.S. Explor. Exped., Moll. p. 180, fig. 205; Otia, p. 55.
Trochus capillaceus, Philippi: Zeitschr. f. Malak., 1848, p. 102.
Trochus episcopus, Hombr. & Jacq.: Voy. Pole Sud, Zool. vol. v, p. 55, pl. xiv, figs. 9–11.
Cantharidus episcopus (Hombr. & Jacq.): Hutton, Man. New Zealand Moll., p. 100.
Cantharidus pruninus (Gould): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 361.
Cantharidus pruininus (Gould): Pilsbry, Man. Conch., ser. I, vol. xi, p. 122, pl. xlvi, figs. 60, 61.

Shell ovate-conical, deep purple, apex pink; surface nearly smooth, densely, finely, spirally striate all over. Last whorl rounded, or obtusely angular. Aperture less than one-half the length of the shell, iridescent within with finer dense folds. Columella subvertical, expanded in a callous pad over the umbilicus. Relative length of spire very variable. Alt. 22, diam. 16 mm.; alt. 19, diam. 16 mm.; alt. 30, diam. 19 mm.

Hab.—Auckland Is.; Campbell Is.

Var. *perobtusa*, Pilsbry.

Man. Conch, ser. I, vol. xi (1889), p. 123, pl. xxxiv, fig. 1.

Spire short, very obtuse at the apex, whorls 5, the last large, descending anteriorly. Aperture as long as the spire; other characters as in *C. pruninus*—(Pilsbry). Alt. 20, diam. 19 mm.

Hab.—Auckland Is.; Campbell Is.; Macquarie Is.

Mr. A. Hamilton, of Dunedin, collected specimens on the latter island; some are dark-purple, others cinereous.

18. CANTHARIDUS TENEBROSUS, A. Adams.

Canthiridus tenebrosus, A. Ad.: Proc. Zool. Soc., 1851, p. 170.

Cantharidus tenebrosus, A. Ad.: Hutton, Man. New Zealand Moll., p. 101; Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 361; (?) Hutton, Trans. New Zealand Inst., vol. xiv, p. 166, pl. vii, fig. L (radula); Pilsbry, Man. Conch., ser. I, vol. xi, p. 123, pl. xxxiv, fig. 3.

Shell conical, elevated, bluish-black or cinereous, 6–7 spiral liræ on the penultimate whorl, 13–16 on the body-whorl, the latter bluntly subangular at the periphery. Columella covering the umbilicus. Alt. 11·5, diam. 9·5 mm.

Hab.—Throughout New Zealand. On seaweeds.

Var. *Huttonii*, E. A. Smith.

Trochus (*Cantharidus*) *Huttonii*, E. A. Smith: Journ. Linn. Soc., (Zool.) vol. xii (1876), p. 558, pl. xxx, fig. 20; Hutton, Man. New Zealand Moll., p. 100.

Cantharidus tenebrosus var. *Huttoni*: Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 362; Hutton, Trans. New Zealand Inst., vol. xiv, p. 165, pl. vii, fig. M (radula); Pilsbry, Man. Conch., ser. I, vol. xi, p. 123, pl. xxxiv, fig. 2.

Gibbula plumbea, Hutton: Journ. de Conch., 1878, p. 33.

Shell short, conical, bluish-black, 8–11 spiral liræ on the penultimate-, 17–20 on the body-whorl. Columella covering the umbilicus. Alt. 9, diam. 7 mm.; alt. 14·5, diam. 10·5 mm.; alt. 15, diam. 13 mm. (specimen from Dunedin).

Hab.—The same as the type, but more plentiful.

19.

Limax purpuratus
Cantharidus purpu
p. 99 ;
p. 36
p. 12
ser. I,
Trochus rostratus,
Trochus elegans, G
Phasianella rubella
Trochus pallidus, I
pl. xiv
Cantharidus pallid
Moll.,
Trochus rostratus,
Trochus torosus (Q
Cantharidus purpu
p. 125

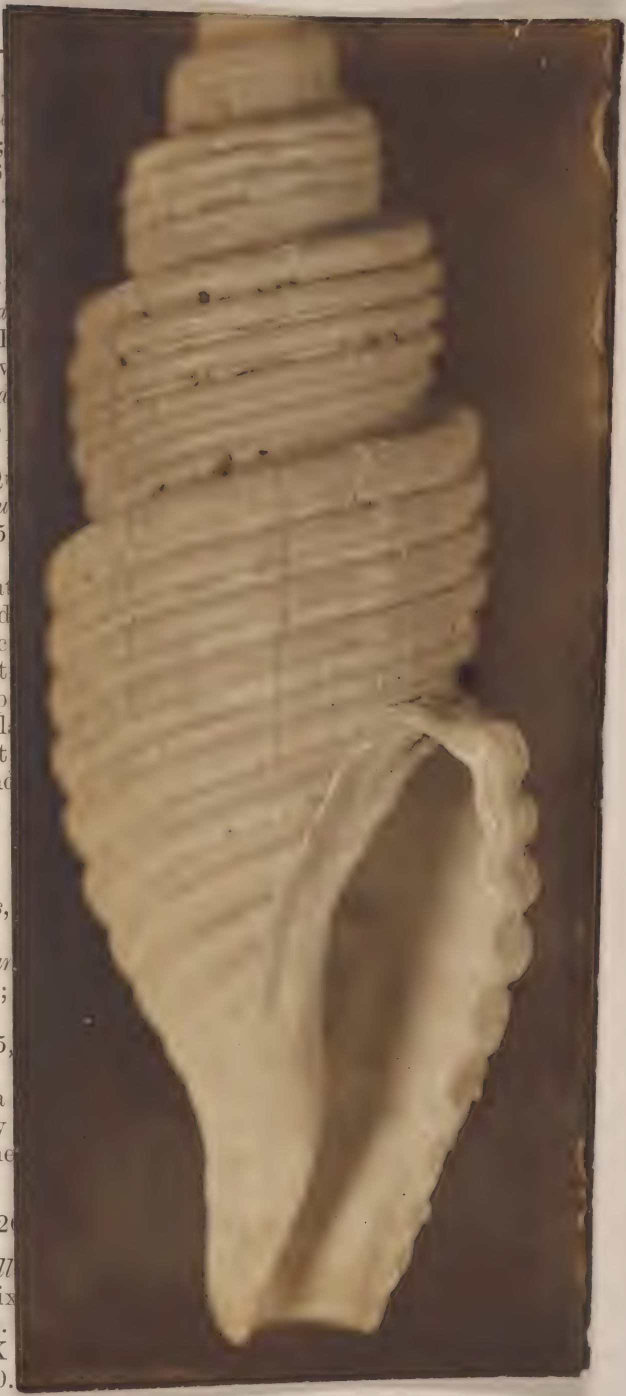
Shell imperfora
green, the remaind
streaks; spirally c
the narrow interst
vex beneath. Ap
within. Columell
diam. 19 mm.; alt
Hab.—Auckland
floating seaweeds.

Trochus texturatus,
p. 90.
Cantharidus textu
p. 99 ;
fig. I
p. 125,

The ribs with a
surface covered by
Hab.—The same

2

Cantharidus pupill
vol. ix
Trans.
fig. K
p. 130.



19. Cantharidus purpuratus (Martyn).

Limax purpuratus, Martyn: Univ. Conch., pl. lxviii (1784).
Cantharidus purpuratus (Martyn): Hutton, Man. New Zealand Moll., p. 99; Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 361; Hutton, Trans. New Zealand Inst., vol. xv, p. 124, pl. xiv, fig. O (radula); Pilsbry, Man. Conch., ser. I, vol. xi, p. 124, pl. xlv, fig. 44.
Trochus rostratus, Gmelin: Syst. Nat., 13th ed., p. 3580.
Trochus elegans, Gmelin, t.c., p 3581.
Phasianella rubella, Menke: Syn. Meth. Moll., p. 51 (*teste* Hutton).
Trochus pallidus, Hombr. & Jacq.: Voy. Pole Sud, Zool. vol. v, p. 55, pl. xiv, figs. 12, 13 (not *pallidus*, Forbes).
Cantharidus pallidus (Hombr. & Jacq.): Hutton, Man New Zealand Moll., p. 100.
Trochus rostratus, Kiener: Spec. et Icon., pl. xlvi, fig. 1.
Trochus torosus (Quoy MS): Kiener, op. cit., pl. xlvi, fig. 3.
Cantharidus purpuratus (Martyn): Pilsbry, Man. Conch., ser. I, vol. xi, p. 125, pl. xlv, fig. 45.

Shell imperforate, acutely conical, first whorls reddish or reddish-green, the remainder whitish, sometimes ornamented with rosy oblique streaks; spirally cingulate, cinguli flat, five on the penultimate whorl, the narrow interstices lamellose-striate. Last whorl subangular, convex beneath. Aperture subtrapezoidal, lirate and highly iridescent within. Columella nearly vertical Alt. 22, diam. 16 mm.; alt. 32, diam. 19 mm.; alt. 24, diam. 20 mm

Hab.—Auckland to Banks' Peninsula; on rocks, but more often on floating seaweeds.

Var. *texturata*, Gould.

Trochus texturatus, Gould: Proc. Bost. Soc. Nat. Hist., vol. iii (1849), p. 90.
Cantharidus texturatus (Gould): Hutton, Man. New Zealand Moll., p. 99; Trans New Zealand Inst., vol. xiv, p. 165, pl. vii, fig. I (radula); Pilsbry, Man. Conch., ser. I, vol. xi, p. 125, pl. xlv, figs. 41–3.

The ribs with a secondary sculpture of fine spiral striæ, the whole surface covered by sharp incremental striæ.

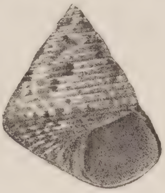
Hab.—The same as the type.

20. Cantharidus pupillus, Hutton.

Cantharidus pupillus, Hutton: Proc. Linn. Soc. New South Wales, vol. ix (1884), p. 362 (not *Trochus pupillus*, Gould); Trans. New Zealand Inst., vol. xiv, p. 165, pl. vii, fig. K (radula); Pilsbry, Man. Conch., ser. I, vol. xi, p. 130.

According to Pilsbry, the *T. pupillus*, Gould, is undoubtedly a species from the west coast of North America, and belongs to the genus *Margarita.*

Shell conical, imperforate, shining, solid, of very variable colour and markings. Specimens from the North Island are cinereous or white, with broad red spots on the upper whorls and below the suture on the last whorl, the remainder being adorned with red spots; sometimes the whole shell is pink, with broad oblique white bands running down the two last whorls to the periphery. The South Island specimens are much duller, the first three or four whorls are mottled with dark-grey and purple, whilst near the sutures white spots are found at regular intervals, 6–7 on a whorl, forming longitudinal bands on the second and third whorl. The last whorls are dark-purple or greenish-brown, with longitudinal, narrow streaks of yellow or yellowish-grey. The whorls, 5–6, are slightly convex, mostly a little shouldered, the last whorl angled at the periphery; all the whorls are cingulate, the cinguli being broad and flat, and the interstices narrow, 5–6 on the penultimate whorl, about 13 on the body-whorl, crossed by fine oblique striæ of growth. Below the sutures and on the periphery of the last whorl two cinguli are usually fused together; base convex; sutures impressed. Aperture oblique, subrhomboidal; outer lip thick, white inside, columella oblique, arched, slightly straightened in the middle, its reflection covering the umbilicus entirely, or leaving only a very narrow fissure. Alt. 8, diam. 7 mm.



Cantharidus pupillus, Hutton.

Hab.—Heads of Manukau Harbour; Lyttelton; Banks' Peninsula to Dunedin On seaweeds; not common.

Captain Hutton rightly remarks that this is a very variable shell. The character and number of the cinguli I found to be constant. North Island specimens especially are lovely shells; hardly two are alike in colour and pattern.

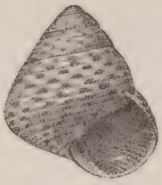
21. CANTHARIDUS SANGUINEUS (Gray).

Trochus (*Gibbium*) *sanguineus*, Gray: Dieffenbach's "New Zealand," vol. ii (1843), p. 238.

Gibbula sanguinea (Gray): Hutton, Man. New Zealand Moll., p. 102.

Cantharidus sanguineus (Gray): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 362; Pilsbry, Man. Conch., ser. I, vol. xi, p. 131, pl. xlvii, figs. 92, 93.

Shell conical, imperforate, spirally ribbed, ribs 5–6 on the penultimate- and 10–14 on the body-whorl; pinkish-white or light-grey with blood-red spots on the ribs, or with red flexuous longitudinal markings. Whorls 6, slightly convex, the last angled at the periphery, rather convex below. Suture distinct. Aperture oblique, outer lip thick, inside with a white opaque callosity; columella oblique, white, its expansion covering the umbilicus, leaving sometimes a small fissure. Alt. 9, diam. 7 mm.



Cantharidus sanguineus (Gray).

Hab.—Auckland to Wellington; Chatham Is.

Like Captain Hutton, I have only seen dead specimens.

Var. *cælata*, Hutton.

Proc. Linn. Soc. New South Wales, vol. ix, p. 363; Pilsbry, Man. Conch., ser. I, vol. xi, p. 131.

Shell smaller, more deeply ribbed and the ribs narrower; 5–7 on the penultimate-, 15–16 on the body-whorl; they are sometimes rendered obsoletely granular by the lines of growth that cross them obliquely. Columella with an obsolete tooth in the middle; umbilicus completely closed up. Alt. 5·5, diam. 4·5 mm.

Hab.—Foveaux Strait (dredged).

Var. *elongata*, n.var.

Differs from the type in being narrower, the whorls of spire obsoletely shouldered, the riblets more numerous and finer, 10–11 on the penultimate-, about 18–19 on the body-whorl. Colour white or light-grey, ribs light-brown or reddish-brown, dissolved in spots on the base only. Outer lip edged with white and brown dots, followed by a broad white opaque band; interior pearly. Aperture quadrangular, columella nearly vertical, with an obsolete tooth in the middle, the expansion covering the umbilicus. Alt. 7·5, diam. 5 mm.

Hab.—Lyall Bay (A. Hamilton).

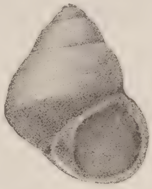
22. CANTHARIDUS DILATATUS (Sowerby).

Elenchus dilatatus, Sowerby: Proc. Zool. Soc., 1870, p. 251; Hutton, Man. New Zealand Moll., p. 101.

Cantharidus dilatatus (Sby.): Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 363; Pilsbry, Man. Conch., ser. I, vol. xi, p. 148.

Chrysostoma simulata, Hutton: Cat. Mar. Moll., 1873, p. 36.
Gibbula simulata, Hutton: Man. New Zealand Moll., p. 102.
Cantharidus simulatus, Hutton: Proc. Linn. Soc. New South Wales, vol. ix, p. 363.

Shell conical, imperforate, shining, cinereous, pink or pinkish-brown, usually with white markings near the suture or tessellated with white, sometimes a broad dark-brown band encircling the middle of the whorls, and one on the centre of base; finely, spirally striated. Whorls 6, slightly convex, the last obtusely angled at the periphery and considerably expanded. Aperture oblique, subrotund; outer lip strengthened by an inner, white callosity, interior highly bluish-green, iridescent. Columella regularly arched, broadly expanded, and completely covering the umbilicus. Base slightly convex. Alt. 9, diam. 8 mm.



Cantharidus dilatatus (Sby.).

Hab.—Hokianga; Auckland; Cook Strait; Chatham Is. On seaweeds near low-water mark; scarce.

By comparing specimens in the Canterbury Museum, I have satisfied myself as to the undoubted identity of *Elenchus dilatatus*, Sby., with *Cantharidus simulatus*, Hutton.

23. Cantharidus rufozona, A. Adams.

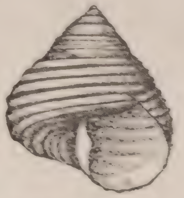
Canthiridus rufozona, A. Ad.: Proc. Zool. Soc., 1851, p. 170.
Cantharidus rufozona, A. Ad.: Hutton, Man. New Zealand Moll., p. 101; Pilsbry, Man. Conch., ser. I, vol. xi, p. 150.

Shell globosely conoidal, small, rather thin, imperforate, white or cinereous with distant rufous or pinkish brown spiral ribs, 5 on the penultimate-, 13 on the body-whorl. Whorls 6, scarcely convex, the body-whorl rounded at the periphery. Suture impressed. Interstices between the ribs smooth. Aperture subquadrangular, outer lip slightly indented, sharp, articulated with pinkish-brown, with an inner opaque white band, interior iridescent. Columella vertical, white, slightly toothed in the middle; columellar expansion small, but perfectly filling up the umbilicus. Base convex. Alt. 6, diam. 5 mm.

Hab.—Near Auckland. The specimens in my collection were only lately collected and given to me by Mr. Charles Spencer, of Auckland. I have not seen this species before.

Pilsbry states, "Habitat unknown," but Captain Hutton (l.c.) states that he added the species to our list on the authority of Mr. E. A.

Smith, who says that specimens from New Zealand are in the British Museum, and kindly permits me to add that he agrees with my opinion, but considers the illustration here given to represent a young shell.



Cantharidus rufozona, A. Ad.

I can cordially endorse everything Mr. Pilsbry says about Adams' Monograph of the Trochidæ (t.c., p. 6).

Subgen. BANKIVIA (Beck), Krauss, 1848.

Sect. BANKIVIA, s.s.

24. CANTHARIDUS FASCIATUS (Menke).

Phasianella fasciata, Menke }
Phasianella fulminata, Menke } Syn. Meth. Moll., 1830, p. 141.
Phasianella undatella, Menke }
Bankivia varians (Beck): Krauss, Südafrik. Moll., p. 105, pl. vi, fig. 1; Hutton, Man. New Zealand Moll., p. 101; Proc. Linn. Soc. New South Wales, vol. ix, p. 365.
Bankivia purpurascens, A. Adams: Proc. Zool. Soc., 1851, p. 171.
Bankivia major, A. Adams: t.c., p. 171.
Bankivia nitida, A. Adams: t.c., p. 172.
Cantharidus fasciatus, Pilsbry: Man. Conch., ser. I, vol. xi, p. 139, pl. xl, figs. 28–33.

Shell turreted, thin, shining, white, creamy or pink, plain or banded with pink, purple or brown. Last whorl rounded. Aperture ovate, outer lip acute, columella sinuous, obliquely truncate below. Alt. 19, diam. 8 mm.

Hab.—Waikanae, Cook Strait.

Sect. LEIOPYRGA, H. & A. Adams, 1863.

25. CANTHARIDUS PICTURATA (H. & A. Adams).

Leiopyrga picturata, H. & A. Adams: Ann. & Mag. Nat. Hist., 1863, vol. xi, p. 19.
Cantharidus picturata, Pilsbry: Man. Conch., ser. I, vol. xi, p. 140, pl. xlv, figs. 46–8.

Shell turreted, narrowly perforate, shining, white, with longitudinal undulating or ziczac pinkish or purplish lines, sometimes with spiral bands at the periphery and around the umbilicus. Whorls more or less carinated at the periphery, the carina exserted above the sutures on the spire. Suture margined. Columella not truncate. Alt. 8–12, diam. 5–7 mm.

Hab.—Stuart Island (Stewart Island?), New Zealand.

I have not seen any New Zealand specimens.

Subgen. THALOTIA, Gray, 1847.

Sect. THALOTIA, s.s.

26. CANTHARIDUS CONICUS (Gray).

Monodonta conica, Gray: King's Survey Australia, vol. ii (1827), p. 479.
(?) *Trochus pictus*, Wood: Index Test. Suppt., pl. v, fig. 28.
Thalotia picta (Wood): A. Adams, Proc. Zool. Soc., 1851, p. 172.
Monodonta turrita, Menke: Moll. Nov. Holl., p. 15.
Trochus Lehmanni, Kiener: Species, genre *Trochus*, pl. xlvi, fig. 2 (not of Menke).
Thalotia Woodsiana, Angas: Proc. Zool. Soc., 1872, p. 611, pl. xlii, figs. 4, 5.
Trochus Troschelii, Philippi: Conch. Cab., p. 131, pl. xxiii, fig. 2.
Cantharidus rufozona, A. Ad.: Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 362 (not of A. Adams).
Thalotia conica (Gray): Hutton, Man. New Zealand Moll., p. 97.
Cantharidus conicus (Gray): Pilsbry, Man. Conch., ser. I. vol. xi, p. 141, pl. xlvi, fig. 73; pl. xlvi, figs. 67, 68 (*T. Woodsiana*).

Shell elevated, conical, imperforate, pinkish or greyish white with crimson apex and numerous close longitudinal dark reddish-brown stripes, often cut into tessellations. Whorls of spire with 5 or 6 granose liræ, 13–14 on the last whorl. Peristome thick, plicate within. Columella straight, denticulate, with a strong basal truncation. Alt. 20, diam. 13 mm.

Hab.—Rangitoto Channel, near Auckland; scarce (T. F. Cheeseman).

The species was omitted from the list of New Zealand mollusca by Captain Hutton in his revision (Proc. Linn. Soc. New South Wales, vol. ix, p. 357, footnote). From his description of *Cantharidus rufozona* there is no doubt that it is not that species, but *C. conicus* (Gray). Two specimens from Auckland in my collection agree perfectly with typical specimens from Tasmania. There are also specimens in the Auckland Museum, marked as coming from Auckland.

It is evident that Adams' short description of *C. rufozona* does not refer to *C. conicus*, since he described that species under the name of *Thalotia picta* (Wood).

Subfam. GIBBULINÆ.

Genus GIBBULA, Risso, 1826.

Sect. CALLIOTROCHUS, Fischer.

27. GIBBULA TASMANICA, Petterd.

Gibbula Tasmanica, Petterd: Quart. Journ. Conch., vol. ii (1879), p. 103; Pilsbry, Man. Conch., ser. I, vol. xi, p. 236, pl. xl, fig. 20.

Shell small, perforate, conical, lustreless, whitish tinged with yellow, unicoloured, or marked with a few angular, radiating maculations of brown. Sutures impressed. Whorls 6, convex, finely, spirally lirulate, last whorl bluntly subangular, convex beneath, impressed round the umbilicus. Aperture oblique, angular above, broadly rounded below. Umbilicus narrow, funnel-shaped. Alt. 6, diam. 5·5 mm. My specimen with six whorls has alt. 8, diam. 7 mm.

Hab.—Lyall Bay.

Specimens collected by Mr. A. Hamilton of Dunedin correspond with the diagnosis and figure given by Pilsbry. I have not seen any Tasmanian specimens.

Sect. CANTHARIDELLA, Pilsbry.

28. GIBBULA FULMINATA (Hutton).

Chrysostoma fulminata, Hutton: Cat. Mar. Moll., 1873, p. 36.
Margarita fulminata, Hutton: Man. New Zealand Moll., p. 103; Proc. Linn. Soc. New South Wales, vol. ix, p. 364.
Gibbula fulminata, Pilsbry: Man. Conch., ser. I, vol. xi, p. 216, pl. xliii, figs. 14–16.

Shell narrowly perforate, globose-conoidal, shining, smooth, except for a few striæ round the umbilicus. Colour pink or pinkish-brown, generally with a series of white blotches alternating with darker ones below the sutures, a girdle of white blotches along the periphery and often around the umbilicus; intervening spaces with ziczac streaks. Whorls 5, convex. Aperture rounded-quadrate, lip white-margined, columella arcuate; umbilicus white. Alt. 7·5, diam. 8 mm.

Hab.—Auckland to Wellington; Chatham Is.

29. GIBBULA ROSEA (Hutton).

Chrysostoma rosea, Hutton: Cat. Mar. Moll., 1873, p. 36.
Margarita rosea, Hutton: Man. New Zealand Moll., p. 103; Proc. Linn. Soc. New South Wales, vol. ix, p. 364.
Gibbula rosea (Hutton): Pilsbry, Man. Conch., ser. I, vol. xi, p. 216.

Shell small, globose-conoidal, narrowly umbilicated, pink with a few longitudinal white streaks or narrow spiral bands and purplish spots on the last whorl; spirally, closely striate. Whorls 3½, convex, the last rounded at the periphery; protoconch white, smooth. Aperture circular, thickly margined with a white callosity all round, columella subtruncate below. Umbilicus narrow but open, its margin slightly crenulate by radial folds. Base convex. Alt. 3·5, diam. 6 mm. Specimens from Bounty Island measure 2·25 × 3 mm.

Hab.—Stewart I.; Bounty I.; Campbell I.

30. Gibbula antipoda (Hombron & Jacquinot).

Margarita antipoda, Hombr. & Jacq.: Voy. Pole Sud, Zool. vol. v (1854), p. 58, pl. xiv, figs. 26–8; Hutton, Man. New Zealand Moll., p. 103; Proc. Linn. Soc. New South Wales, vol. ix, p. 363.

Gibbula antipoda, Pilsbry: Man. Conch., ser. I, vol. xi, p. 217, pl. xxxiii, figs. 102–4.

Shell small, perforate, depressed-conoidal, yellowish-green, iridescent, with 4–5 green or blackish spiral bands above, and sometimes below, the periphery. Whorls 3, the last very large, faintly spirally striated and with rather strong growth-lines, periphery rounded. Aperture large, round, margined by a white callus. Umbilicus almost closed up by the columellar reflection. Alt. 8, diam. 8 mm. A specimen from Antipodes Island measures 4·5 × 6 mm.

Hab.—Auckland Is.; Antipodes I.

31. Gibbula nitida, Adams & Angas.

Gibbula nitida, Ad. & Ang.: Proc. Zool. Soc., 1864, p. 36; Hutton, Man. New Zealand Moll., p. 102; Proc. Linn. Soc. New South Wales, vol. ix, p. 364; Pilsbry, Man. Conch., ser. I, vol. xi, p. 217, pl. xxxvii, figs. 25–7.

Chrysostoma inconspicua, Hutton: Cat. Mar. Moll., 1873, p. 36.

Margarita (?) *inconspicua*, Hutton: Man. New Zealand Moll., p. 102; Trans. New Zealand Inst., vol. xv, p. 124, pl. xiv, fig. N (radula).

Shell small, conical, narrowly umbilicate, olive-yellow or bluish-grey, marked with numerous, continuous, thread-like, white, spiral lines, generally broken up in tessellations; spire elevated, with convex outlines; last whorl obtusely angular around the periphery; base with 7–8 concentric liræ. Aperture rounded-quadrate, outer lip finely crenulated, within brilliantly iridescent; columella arcuate. Umbilicus funnel-shaped, yellowish within. Alt. 6·5, diam. 5·5 mm.; alt. 7, diam. 6·5 mm.

Specimens from Dunedin are bluish-black, shining more or less distinctly, spirally striate, umbilicus half covered by the columellar expansion. Alt. 8, diam. 7 mm.

Hab.—East and west coasts of both the North and South Islands; on stones near low-water mark.

32. GIBBULA SCAMNATA (Fischer).

Trochus (*Gibbula*) *scamnatus*, Fischer: Journ. de Conch., 1878, p. 66; Coq. Viv., p. 394, pl. cxvii, fig. 4.

Gibbula scamnata (Fisch.): Pilsbry, Man. Conch., ser. I, vol. xi, p. 220, pl. xxx, fig. 6.

Shell small, subperforate, conoidal, cinereo-olivaceous, with spiral blackish bands; whorls 6, somewhat convex with 5–6 elevated liræ on the penultimate whorl; last whorl subangulate, base convex with 7–8 concentric liræ, the interstices narrow. Aperture subrhomboidal, sulcate within; columella arcuate, a little reflexed and almost covering the umbilicus. Alt. 7, diam. 7·5 mm. (Fischer).

Hab.—Brighton, Otago; Oceanica (Fischer).

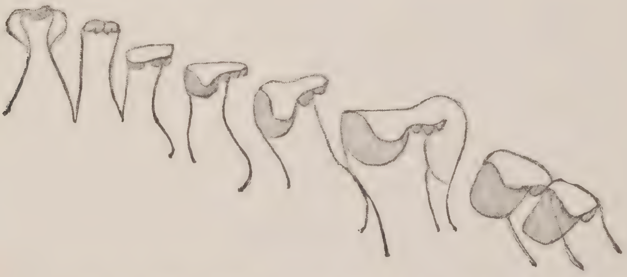
Specimens collected by Mr. A. Hamilton undoubtedly belong to this species, for which no definite locality was given by Fischer.

The species closely resembles *Cantharidus rufozona*, A. Ad., from which, however, it may at once be distinguished by its partly open umbilicus, its arcuate columella without any indication of a tooth, its larger size, and darker colour.

This is perhaps the undescribed form of *Cantharidus* mentioned by Pilsbry under *C. tenebrosus* (t.c., p. 124).

33. GIBBULA SUTERI (E. A. Smith).

Photinula Suteri, E. A. Smith: Proc. Malac. Soc., Vol. i (1894), p. 58, pl. vii, Fig. 3.



Portion of radula of *Gibbula Suteri* (E. A. Smith).

Shell small, turbinate, imperforate, uniformly black or grey, cinereous, pink, etc., longitudinally variegated and tessellated with white. Whorls 5, convex, rapidly increasing, faintly spirally striate. Last whorl angled at the periphery. Aperture rounded, outer lip sharp, columella arcuate, its expansion completely covering the umbilicus, leaving only a slight pit; umbilical tract white, impressed. Base slightly convex. Alt. 4, diam. 4 mm.

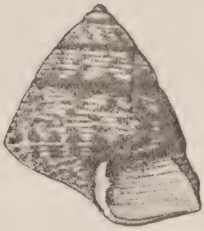
Hab.—Lyttelton Harbour (H. S.); Lyall Bay (A. Hamilton).

On examining the animal I found that a jaw is present and the radula is decidedly that of the genus *Gibbula*. A figure of the teeth is here given. According to Fischer, *Photinula* has no jaw. The character of the radula and presence of a jaw induce me to class this species under *Gibbula*.

Type in the British Museum.

34. Gibbula micans, n.sp.

Shell minute, subperforate or imperforate, conical, iridescent, shining, light-yellow with radiate oblique broad streaks of dark-brown, the intervals with a few dots of light-brown; base tessellated with yellow and brown. Whorls 6, the first two minute, smooth, reddish-brown, the others finely spirally striate, about 15 striæ on the penultimate whorl; spire conic, scarcely convex, last whorl carinate. Aperture subquadrangular, oblique, outer and basal lip sharp, margined with a white band; interior lirate, iridescent; columella subvertical, slightly arched, subdentate in the middle. Umbilicus partly or completely covered by the columellar expansion. Base convex, umbilical tract slightly impressed, white. Alt. 4, diam. 3–5 mm.



Gibbula micans, n.sp.

Hab.—Resolution I. (A. Hamilton).

Type in my collection.

Genus MONILEA, Swainson, 1840.

35. Monilea egena (Gould).

Solarium egenum, Gould: Proc. Bost. Soc. Nat. Hist., vol. iii (1849), p. 84; U.S. Explor. Exped., Moll. p. 196, fig. 226.

Monilea Zealandica, Hutton: Cat. Mar. Moll., 1873, p. 40.

Margarita Zelandica (Hutton) · Sowerby, Conch. Icon., fig. 17.

Torinia egena (Gould): Marshall in Tryon's Man. Conch., ser. I, vol. ix, p. 22, pl. vi, figs. 22, 23.

Monilea egena (Gould): Hutton, Man. New Zealand Moll., p. 102; Proc. Linn. Soc. New South Wales, vol. ix, p. 365; Pilsbry, Man. Conch., ser. I, vol. xi, p. 253, pl. xxxvii, fig. 13.

Shell small, low, ovate-conic, umbilicated, ashy-white, pearly beneath. Whorls 6, each with four sharply compressed spiral ribs,

the two uppermost beaded. Umbilicus one-third of base, tunnel-shaped, penetrating to the apex, its sides excavated on each whorl, the verge of which is crenulated. Aperture nearly circular. Alt. 5·5, diam. 7 mm.

Hab.—Bay of Islands; near Auckland, in sandy places, below low-water mark; not common (T. F. Cheeseman).

Genus CALLIOSTOMA, Swainson, 1840.

36. Calliostoma spectabile (A. Adams).

Ziziphinus spectabilis, A. Adams: Proc. Zool. Soc., 1854, p. 37, pl. xxvii, fig. 7; Hutton, Man. New Zealand Moll., p. 98; Proc. Linn. Soc. New South Wales, vol. ix, p. 360.
Calliostoma spectabilis, Pilsbry: Man. Conch., ser. I, vol. xi, p. 332, pl. xvi, fig. 12.

Shell large, imperforate, conical, flesh-coloured or yellowish, dotted with pink on the spiral ribs, which are coarsely granose, about 7 on the penultimate whorl, about 8 on the base. Whorls 6, nearly flat, the last obtusely angled at the periphery; base rather flattened. Aperture rounded-quadrangular. Columella pearly, arcuate. Umbilical region without any callus. Alt. 35, diam. 37 mm.

Hab.—Auckland; Auckland Is. (*fide* Von Martens); Chatham Is. (*fide* Pilsbry). A rare shell.

37. Calliostoma tigris (Martyn).

Trochus tigris, Martyn: Univ. Conch., vol. ii (1784), pl. lxxv; Gmelin, Syst. Nat., 13th ed., p. 3585, No. 128.
Granatum, Chemnitz: Conch. Cab., vol. v, p. 100, figs. 1654, 1655.
Ziziphinus granatum (Chemn.): Hutton, Man. New Zealand Moll., p. 98; Proc. Linn. Soc. New South Wales, vol. ix, p. 360.
Calliostoma tigris, Pilsbry: Man. Conch., ser. I, vol. xi, p. 333, pl. xli, fig. 30.

Shell large, conical, imperforate, light-yellowish, longitudinally painted with numerous irregular reddish-chestnut stripes. Delicate finely beaded spiral liræ, 16–20 on the penultimate whorl, 18–25 on the upper surface of the body-whorl. Spire elevated, concave above. Whorls 10–12, the last convex, rounded at the periphery. Aperture rhomboidal, columella arcuate, a small callus on the umbilical region. Alt. 59, diam. 58 mm.; alt. 45, diam. 45 mm.

Hab.—Auckland to Cook Strait; Chatham I.

38. Calliostoma punctulatum (Martyn).

Trochus punctulatus, Martyn: Univ. Conch., pl. xxxvi (1784).
Trochus diaphanus, Gmelin: Syst. Nat., 13th ed., p. 3580.
Turbo grandineus, Valenc.: Voy. "Venus," atlas Moll., pl. iv, fig. 4.

Ziziphinus punctulatus, Hutton: Man. New Zealand Moll., p. 98; Proc. Linn. Soc. New South Wales, vol. ix, p. 360; Trans. New Zealand Inst., vol. xiv, p. 165, pl. vii, fig. H (radula).
Calliostoma punctulatum, Martyn: Pilsbry, Man. Conch., ser. I, vol. xi, p. 334; vol. x, pl. lxv, fig. 75.

Shell conoidal, imperforate, light fawn-colour, with narrow, conspicuously beaded, spiral ridges, 8–12 on the penultimate whorl. Sutures impressed. Whorls 8–9, the last rounded at the periphery. Columella arcuate. Umbilical region without any callus. Alt. 36, diam. 36 mm.

Hab.—Cook Strait to Stewart I.

39. CALLIOSTOMA PELLUCIDUM (Valenciennes).

Trochus pellucidus, Valenc: Voy. "Venus," Moll. (1846), pl. iv, fig 2.
Ziziphinus granatus (Chemn.): Reeve, Conch. Icon., fig. 2 (not *Trochus granatum*, Chemn. = *C. tigris*, Mart.).
Calliostoma pellucidum, Valenc.: Pilsbry, Man. Conch., ser. I, vol. xi, p. 334; vol. x, pl. xli, fig. 36.

Shell conical, imperforate, yellowish with a few brown obliquely longitudinal streaks. Close and numerous beaded spiral liræ dotted minutely with brown and white, 8–10 on the penultimate whorl; they are closer and smaller just below the periphery. Sutures slightly impressed. Last whorl subangular at the periphery. Aperture rhomboidal, columella arcuate, with a slight tubercle at the base. Umbilical region with a slight callus. Alt. 30, diam. 30 mm.

Similar to *C. tigris*, but differently coloured, more carinated, with fewer series of granules.

Hab.—Whangarei, Auckland; Cook Strait.

40. CALLIOSTOMA SELECTUM (Chemnitz).

Trochus selectus, Chemnitz: Conch. Cab., vol. xi (1795), p. 168, pl. cxcvi, figs. 1896, 1897.
Trochus Cunninghami, Gray: Griffith's "Cuvier's Anim. Kingd.," vol. xii (1834), pl. i, fig. 7.
Ziziphinus selectus (Chemn.) and *Cunninghami* (Gray): Hutton, Man. New Zealand Moll., p. 98.
Ziziphinus decarinatus, Hutton: Proc. Linn. Soc. New South Wales, vol. ix, p. 359 (not *decarinatus*, Perry).
Trochus torquatus, Anton: Philippi, Conch. Cab., p. 261, pl. xxxviii, fig. 13.
Calliostoma selectum, Chemn.: Pilsbry, Man. Conch., ser. I, vol. xi, p. 335, pl. lxv, figs. 73, 74, 78.

Shell large, imperforate, pale fawn-colour, elongated brown dots on the spiral riblets, which are closely granulose, 10–11 on the penultimate whorl. Spire conical, concave on the upper part. Whorls 8–9,

flat, the last slightly convex above, obtusely angular at the periphery, somewhat convex beneath. Aperture subrhomboidal, columella arcuate. Umbilical region with a large callosity. Alt. 50, diam. 57 mm.; alt. 37, diam. 47 mm.

Hab.—Auckland to Cook Strait.

⁂ *Calliostoma Lessonæanum*, Tapp.-Can.: Pilsbry, Man. Conch., ser. I, vol. xi, p. 402, is *not* a New Zealand shell.

Genus EUCHELUS, Philippi, 1847.

Sect. EUCHELUS, s.s.

(=*Huttonia*, T. W. Kirk: Trans. New Zealand Inst., vol. xiv, p. 282.)

41. EUCHELUS BELLUS, Hutton.

Euchelus bellus, Hutton: Cat. Mar. Moll., 1873, p. 37; Man. New Zealand Moll., p. 95; Proc. Linn. Soc. New South Wales, vol. ix, p. 357; Pilsbry, Man. Conch., ser. I, vol. xi, p. 435, pl. lxvii, fig. 80.

Huttonia bella, Hutton: Trans. New Zealand Inst., vol. xv, p. 123, pl. xiv, fig. I (operculum and radula).

Shell small, globose-conic, pinkish-white varied with darker markings, imperforate, with granose spiral liræ, 7–8 on the penultimate whorl, 10 on the body-whorl. Whorls 5, convex, the last globose. Aperture rounded, columella concave, terminating in a tooth, below it a narrow notch, and another tooth on the basal lip. Alt. 6·5, diam. 6·5 mm.

Hab.—Chatham I.

Var. *iricolor*, T. W. Kirk.

Huttonia iricolor, T. W. Kirk: Trans. New Zealand Inst., vol. xiv (1882), p. 282; Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 358.

Euchelus bellus var. *iricolor*, Pilsbry: Man. Conch., ser. I, vol. xi, p. 436.

Granules coarser; dirty chocolate, interior bluish-green.

Hab.—Auckland to Waikanae.

42. EUCHELUS HAMILTONI (T. W. Kirk).

Huttonia Hamiltoni, T. W. Kirk: Trans. New Zealand Inst., vol. xiv (1882), p. 283.

Euchelus Hamiltoni, T. W. Kirk: Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 358; Pilsbry, Man. Conch., ser. I, vol. xi, p. 436.

Shell perforate, spiral granular ribs very fine, white or pinkish-white with darker spots in diagonal lines. Inside white.

Hab.—Wellington.

Pilsbry thinks this may prove to be the same as *E. Tasmanicus*, Ten.-Woods. I have seen neither species.

Subfam. UMBONIINÆ.

Genus ETHALIA, Adams, 1853.

43. ETHALIA ZELANDICA (Hombr. & Jacq.).

Rotella Zelandica, Hombr. & Jacq.: Voy. Pole Sud, Zool. vol. v (1854), p. 53, pl. xiv, figs. 5, 6; Hutton, Man. New Zealand Moll., p. 92.
Rotella Neozelanica, Hombr. & Jacq.: Hutton, Proc. Linn. Soc. New South Wales, vol. ix, p. 357.
Globulus anguliferus, Philippi: Conch. Cab. (1853 ?), p. 51, pl. viii, fig. 3.
Umbonium chalconotum, A. Adams: Proc. Zool. Soc., 1853, p. 188.
Ethalia Zelandica, Hombr. & Jacq.: Pilsbry, Man. Conch., ser. I, vol. xi, p. 459, pl. lviii, figs. 9, 32, 33; pl. lix, fig. 66.

Shell depressed, imperforate, solid, yellowish or pinkish, radiately streaked with chestnut-brown or red above, base with a reddish or purple zone around the central callus, the outer part white. Surface smooth, shining; spire low, conoidal; sutures linear. Last whorl concave above. Umbilical area covered by a thin, radiately rugose, purple and white callus. Aperture rounded-quadrate. Columella short, very thick, inserted in a pad of white callus on the body over the axis. Alt. 11, diam. 19 mm.

Hab.—Auckland to Dunedin.

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NOTES ON SOME NEW ZEALAND *FLAMMULINA*, WITH THE DESCRIPTION OF *F. PONSONBYI*, N.SP.

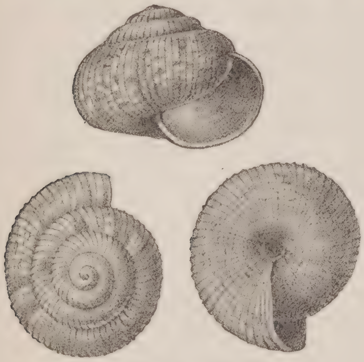
By Henry Suter.

Read 11*th June*, 1897.

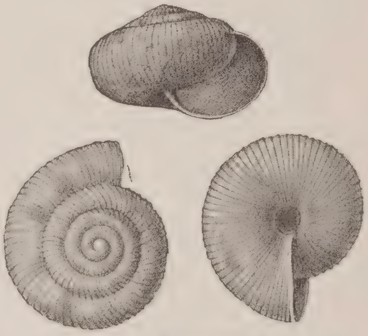
1. Flammulina (Phenacohelix) pilula (Reeve).

Helix pilula, Reeve: Conch. Icon., sp. 809 (1852).
Helix iota, Pfeiffer: Mon. Hel. Viv., vol. iii (1853), p. 69; Proc. Zool. Soc., 1852 (1854), p. 57.
Helix (*Charopa*) *iota* (Pfr.): Hector, Cat. Land Moll. New Zealand, 1873, p. viii.
Patula iota (Pfr.): Hutton, Man. New Zealand Moll., 1880, p. 6.
Charopa (*Thalassia*) *iota* (Pfr.): Tryon, Man. Conch., ser. II, vol. ii, p. 212, pl. lxii, fig. 43 (copy of Reeve).
Phenacohelix granum (Pfr.): Hedley & Suter [*non* Pfr.], Proc. Linn. Soc. New South Wales, ser. II, vol. vii, p. 642.

To Mr. E. A. Smith I am indebted for the following additions to the diagnosis of the species, as observed on the type-specimen, drawings of which, kindly sent by Mr. J. H. Ponsonby, are here reproduced:—"Protoconch, one and a half whorls, minutely spirally striated, no riblets. Nine riblets or eight furrows to a millimetre. The entire surface between the riblets, as seen under an inch objective, is very minutely decussated. In some lights the longitudinal striæ are more noticeable, and *vice versâ*. The ribs are slender, subequidistant, and of equal size. Diam. maj. 3·5, min. 3·25 mm.; alt. 2·5 mm."



Flammulina pilula (Reeve).



Flammulina Ponsonbyi, n.sp.

On examining the specimens in my collection, I found them to agree in the characters pointed out by Mr. E. A. Smith. The number of riblets, of course, is slightly variable. In most specimens I found them to be 9, in some 8, and in one 7 only, per millimetre. The umbilicus is sometimes a little narrower than in the type, but always perfectly open. In adult specimens the diameter is 4, whilst the altitude varies from 2·5 to 3 mm.

Hab.—North Island:—Whangarei; Mt. Wellington Lava Fields, near Auckland; Hunua Range; Wanganui; Waimarama; Forty Mile Bush. Stewart Island:—Halfmoon Bay.

In the nearly allied *F. chordata*, Pfr., I found the same microscopical structure as in *F. pilula*, but the riblets are stouter, cord-like, still less equidistant, from 6 to 8 per millimetre, never more. The very narrow perforation is partly or entirely covered by the columellar reflection. Diam. 4, alt. 3 mm.

2. FLAMMULINA (PHENACOHELIX) PONSONBYI, n.sp.

Patula pilula (Reeve): Hutton, Trans. New Zealand Inst., vol. xvi, p. 161, pl. ix, fig. K; pl. xi, fig. M (radula and jaw).

Fruticicola pilula (Reeve): Hutton, Trans. New Zealand Inst., vol. xvi, p. 194.

Phenacohelix pilula (Reeve): Hedley & Suter, Proc. Linn. Soc. New South Wales, ser. II, vol. vii, p. 641.

Flammulina (*Phenacohelix*) *pilula* (Reeve): Pilsbry, Man. Conch., ser. II, vol. ix, p. 16, pl. iii, fig. 13 (the spire is usually more depressed than here shown); also pl. ii, figs. 6, 7 (jaw and radula).

Shell small, depressed-globose, moderately umbilicated, obtusely angled at the periphery, pale horny with irregular radiate dashes and spots of rufous on the upper surface, passing over in zigzag lines at the base, sometimes imparting a tessellated appearance to it, and extending to the umbilicus; thin, dull. Whorls 4½, regularly increasing, flatly convex, sculptured with numerous arcuate, subequidistant, thread-like riblets, about 8, rarely 7 or 6, per millimetre. Protoconch with numerous fine, microscopic, spiral striæ, interstices between the riblets microscopically decussated. Suture impressed; spire scarcely elevated. Last whorl obtusely angled above the middle, not descending in front. Aperture oblique, lunate. Peristome thin, sharp, slightly reflexed near the umbilicus, which is quite open, slightly perspective, and about one-fifth of the greatest diameter. Base convex. Diam. maj. 6, min. 5·25 mm.; alt. 3·25 mm.

Hab.—North Island:—Whangarei; Auckland; Mt. Wellington Lava Fields and Hillyer's Creek, near Auckland; Hunua Range; Ohaupo; Mt. Taupiri; Otaki Gorge; Forty Mile Bush; Wanganui; Napier.

The type, from Mt. Wellington Lava Fields, is in my collection. The specimen figured is in the British Museum (Natural History).

Mr. J. H. Ponsonby, in whose honour the shell is named, was the first to point out that the shell which we in New Zealand took for *F. pilula*, Reeve, did not correspond with the type in the British Museum, and I am greatly indebted to him for his kind assistance in settling the question.

A nearly allied species is *Flammulina* (*Allodiscus*) *Mossi*, Murdoch (ante, p. 162), in which, however, the umbilicus is much narrower.

Var. *unicolor*, Suter.

Phenacohelix pilula (Reeve) var. *unicolor*, Suter: Trans. New Zealand Inst., vol. xxvi (1894), p. 134.

Hab.—North Island; Mt. Taupiri.

[*From the* 'PROCEEDINGS OF THE MALACOLOGICAL SOCIETY,' Vol. III, Part 1, April, 1898.]

REVISION OF THE NEW ZEALAND RISSOIIDÆ.

By HENRY SUTER.

Read 12th November, 1897.

Genus RISSOIA, Fréminville, 1814 (*em.*).

Subgen. RISSOIA, s.s.

Sect. TURBELLA, Leach, 1847.

1. RISSOIA HUTTONI, nom. nov.

Rissoa nana, Hutton: Cat. Marine Moll. New Zealand, 1873, p. 28; Proc. Linn. Soc. New South Wales, vol. ix (1885), p. 941. (Non *R. nana*, Phil. = *R. dolium*, Nyst.)
Barleeia nana, Hutton: Man. New Zealand Moll., 1880, p. 81.

Shell minute, imperforate, white or yellowish-white, oval, spire short and blunt; whorls 5, swollen, longitudinally roundly ribbed, about 25 ribs on the penultimate whorl, becoming obsolete on the periphery of the body-whorl, base smooth; aperture ovate, lip somewhat thickened, continuous. Operculum unknown. Long. 2·5, lat. 1·25 mm.

Hab.—Stewart Island.

Type in the Colonial Museum, Wellington.

2. RISSOIA HAMILTONI, n.sp. Fig. IV. (p. 5.)

Shell minute, ovate, rimate, colour dirty-white or cinereous; whorls 6, convex, protoconch rufous, longitudinally striate, the succeeding whorls with distant, rounded, longitudinal riblets, about 14 on the body-whorl, the interstices there being slightly broader, base smooth. There is sometimes a rufous band encircling the upper whorls above the suture, and extending on the body-whorl to within a short distance from the mouth. Suture impressed, marked with a marginal thread which continues on the body-whorl below the periphery to the aperture, intercepting the longitudinal riblets. In young specimens the riblets are continued below the spiral thread to the umbilical region. Aperture vertical, rotundly ovate, continuous, outer and basal margins sharp, columella somewhat thickened, rufous, rather concave, subtruncate at the base. Operculum not seen. Long. 2·5, lat. 1·5 mm.

Hab.—Lyall Bay, near Wellington. It was found by Mr. A. Hamilton of Dunedin, whose name I have much pleasure in uniting with the species.

Type in my collection.

Subgen. SABANÆA, Leach, 1847.

3. RISSOIA INCIDATA (Frauenfeld).

Sabanæa incidata, Frauenfeld: Novara-Exped., Zool. vol. ii, Mollusca, p. 12, pl. ii, fig. 29.

Rissoia (*Sabanæa*) *incidata*, Frauenfeld: Tryon, Man. Conch., ser. I, vol. ix, p. 339, pl. lxiii, fig. 65.

Shell conoidal, thick, smooth, brownish; whorls 5, flattened, suture and periphery channelled; lip thickened.

Hab.—Botany Bay (Frauenfeld).

I found several specimens of this interesting little shell on seaweeds at Te Onepoto, near Sumner. The length of my specimens is 1·25 mm.; Frauenfeld gives 1·4 mm.

4. RISSOIA ANNULATA, Hutton.

Rissoa annulata, Hutton: New Zealand Journ. Science, vol. ii (1884), p. 173; Proc. Linn. Soc. New South Wales, vol. ix (1885), p. 940; Macleay Memorial Volume (1893), p. 65, pl. viii, fig. 67.

Shell ovate, smooth, brown, often with a paler band just below the suture; whorls 5, slightly rounded, suture well-marked; aperture rounded, continuous in the adult. The operculum is corneous and paucispiral, without any internal process. Specimens from Lyttelton measure: long. 2·25, lat. 1·25 mm.

Hab.—Auckland; Lyttelton, under stones between tide-marks; Pliocene of Wanganui and Petane (Hutton).

Type in the Canterbury Museum, Christchurch.

The species may be distinguished from *R. subfusca* by its shape and more strongly marked suture.

Var. *minor*, n.var.

Smaller than the typical form, suture more impressed, polished. Long. 1·5, lat. ·75 mm.

Hab.—Foveaux Strait (A. Hamilton).

Type in my collection.

Subgen. Cingula, Fleming, 1828.

Sect. cingula, s.s.

5. Rissoia subfusca, Hutton.

Rissoa subfusca, Hutton: Cat. Mar. Moll. New Zealand, 1873, p. 28; Man. New Zealand Moll., 1880, p. 81.

Rissoa purpurea, Hutton: Cat. Mar. Moll. New Zealand, 1873, p. 29; Man. New Zealand Moll., 1880, p. 80; Proc. Linn. Soc. New South Wales, vol. ix (1885), p. 940.

Rissoia (*Cingula*) *purpurea*, Hutton: Tryon, Man. Conch., ser. I, vol. ix, p. 344, pl. lxxi, fig. 89.

Rissoia (*Cingula*) *purpurea*, Hutton, var. *subfusca*, Hutton: Tryon, Man. Conch., ser. I, vol. ix, p. 344.

Shell small, subulately elongated, smooth, not polished; whorls 6, flat, suture obscure, upper whorls purple, or purplish-red, with a white band below the sutures; last whorl yellowish, also with a white band below the suture. Aperture rounded, peristome continuous, thickened, and slightly expanded. Operculum unknown. Long. 2·5, lat. 1·25 mm.

Hab.—Stewart Island.

Type in the Colonial Museum, Wellington.

Var. *micronema*, n.var.

More cylindrical, protoconch purple, smooth, the rest of the shell is seen under a lens to be marked with strong and close incremental striæ, crossed by numerous liræ. Operculum unknown. Long. 3, lat. 1·25 mm.

Hab.—Stewart Island (A. Hamilton).

Type in my collection.

Sect. onoba, H. & A. Adams, 1854.

6. Rissoia Australis (Tenison-Woods).

Cingulina Australis, Tenison-Woods: Proc. Roy. Soc. Tasmania, 1875 (1876), p. 146; and 1876 (1877), p. 151.

Shell minute, subulate, turreted, thin, shining, transparently white; whorls 7, furnished with elevated rounded spiral keels, with smooth interstices, there being 5 on the last whorl (then 4, 3, etc.), base convex, ornamented with two spiral, rounded, elevated liræ; suture deeply impressed; aperture oblong, entire, outer lip somewhat thickened. Long. 2, lat. ·6 mm.

Hab. — Stewart Island (one young specimen collected by A. Hamilton); Tasmania.

Tryon does not mention this species in his monograph. *Rissoa Australis*, G. B. Sby., is a *Rissoina*, and Tenison-Woods' name may, therefore, be retained. There is also a *Rissoa* (*Setia*) *Australis*, Watson, but Tenison-Woods' name has priority.

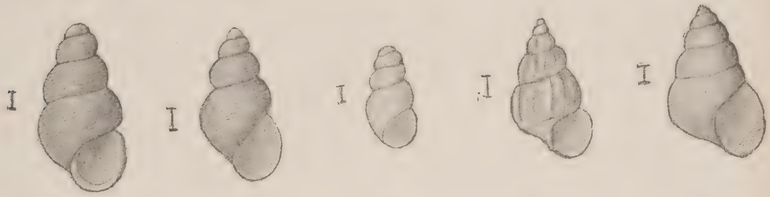
Sect. Ceratia, H. & A. Adams, 1854.

7. Rissoia fumata, n.sp. Fig. I.

Shell minute, subcylindrical, thin, imperforate, dull; whorls 5, flatly convex, closely spirally striated, about ten striæ on the penultimate whorl, first three whorls blackish in colour, the others dark-brown; suture impressed; aperture ovate, lip sharp, slightly thickened, continuous; columella short, subvertical. Operculum unknown. Long. 2, lat. 1 mm.

Hab.—Te Onepoto, near Sumner; a single specimen (H. S.).

Type in my collection.


I. II. III. IV. V.

New Australian Rissoiidæ.

I. Rissoia fumata, n.sp.
II. ——— Foveauxiana, n.sp.
III. ——— lubrica, n.sp.
IV. Rissoia Hamiltoni, n.sp.
V. Barleeia Neozelanica, n.sp.

8. Rissoia Foveauxiana, n.sp. Fig. II.

Shell minute, ovate, rimate, white, semi-transparent; whorls 5, convex, with close spiral striæ, about 9 on the penultimate whorl, protoconch smooth; suture deep, not channelled. Aperture ovate, subvertical, peristome sharp, very little thickened, continuous; columella regularly arched, base of peristome slightly expanded. Operculum not seen. Long. 2·5, lat. 1·5 mm.

Hab.—Foveaux Strait, in about 10 fathoms; very rare.

Type in my collection.

Sect. Setia, H. & A. Adams, 1854.

Subsect. Cingulina, Monts., 1884.

9. Rissoia lubrica, n.sp. Fig. III.

Shell minute, imperforate, pupiform, white, shining; whorls 5, convex, microscopically indistinctly costate; suture impressed, submarginate; aperture semirotund, lip continuous, thickened, expanded at the base. Operculum unknown. Long. 1·75, lat. ·6 mm.

Hab.—Stewart Island; a single specimen.

Type in Canterbury Museum, Christchurch.

Subgen. ALVANIA, Risso, 1826.

Sect. ALVINIA, Monts., 1884.

10. RISSOIA PLICATA, Hutton.

Rissoa plicata, Hutton: Cat. Mar. Moll. New Zealand, 1873, p. 29.
Rissoina plicata, Hutton: Man. New Zealand Moll., 1880, p. 80.
Eglisia plicata, Hutton: Proc. Linn. Soc. New South Wales, vol. ix (1885), p. 939; Tryon, Man. Conch., ser. I, vol. ix, p. 86.
Rissoa (*Alvania* ?) *cheilostoma*, Tenison-Woods: Proc. Roy. Soc. Tasmania, 1876 (1877), p. 152.
Rissoia (*Alvinia*) *cheilostoma*, Tenison-Woods: Tryon, Man. Conch., ser. I, vol. ix, p. 366, pl. lxviii, fig. 91.

Shell imperforate, solid, dull, yellowish, clathrated by longitudinal and spiral ribs, the former becoming obsolete at the periphery, the latter continued and more conspicuous on the base; whorls 7, with deep, lirate, suture; aperture conspicuously bilabiate. Long. 3 mm.

Hab. — Auckland (in Canterbury Museum); Stewart Island (A. Hamilton); Tasmania.

Var. *Lyalliana*, n.var.

Shell cinereous or rufous, occasionally yellowish-white, slightly shorter, less distinctly clathrated, the spiral ribs being more noticeable; the whorls are more shouldered, and the first spiral rib is at a greater distance from the suture.

Hab.—Lyall Bay, near Wellington (A. Hamilton).

Type in my collection.

Genus RISSOINA, D'Orb., 1840.

Sect. RISSOINA, S.S.

11. RISSOINA RUGULOSA (Hutton).

Rissoa rugulosa, Hutton: Cat. Mar. Moll. New Zealand, 1873, p. 28; Proc. Linn. Soc. New South Wales, vol. ix (1885), p. 940; Macleay Memorial Volume (1893), p. 64, pl. viii, fig. 63.
Rissoina rugulosa, Hutton: Man. New Zealand Moll., 1880, p. 80.
Eulima Chathamensis, Hutton: Cat. Mar. Moll. New Zealand, 1873, p. 23; Man. New Zealand Moll., 1880, p. 73.

Shell elongated, conic, yellowish- or greyish-brown, apex white; whorls 7–8, flatly rounded, with longitudinal rounded ribs, 15–16 on the penultimate whorl, and numerous fine spiral striæ, most conspicuous on the body-whorl, on which the longitudinal ribs become obsolete on approaching the aperture, and at the base; aperture ovate, outer lip white, mouth purple inside, peristome continuous. Operculum unknown. Long. 7·5, lat. 3 mm.

Hab.—Throughout New Zealand and the Chatham Islands. Specimens from Auckland measure: long. 6 – 6·5, lat. 2·5 – 2·75 mm.

Type in the Colonial Museum, Wellington.

On comparison with specimens of *R. variegata*, Angas, from Tasmania, I find *R. rugulosa* is more elongate, only beach-worn specimens are white, and I have seen no examples with brown bands; the whorls are less rounded, the suture less impressed, and the outer lip less expanded. The two species are no doubt nearly allied, but, I think, specifically distinct.

Sect. SCHWARTZIELLA, Nevill, 1884.

12. RISSOINA FASCIATA, A. Adams.

Rissoina fasciata, A. Adams: Proc. Zool. Soc., 1851, p. 264; Hutton, Man. New Zealand Moll., 1880, p. 80.

Rissoina (*Oina*) *fasciata*, Angas [error for A. Ad.]: Reeve, Conch. Icon., *Rissoa*, fig. 119.

Rissoina (*Schwartziella*) *fasciata*, Angas: Tryon, Man. Conch., ser. I, vol. ix, p. 380, pl. lxviii, fig. 7.

Shell fulvous, with a peripheral chestnut band, visible on the upper whorls at the suture, and numerous flexuous ribs, about 20 on the penultimate whorl; whorls 7, slopingly convex; outer lip thick, columella short, almost truncate. Long. 6 mm.

Hab.—New Zealand (Angas, Sowerby); Auckland (C. Spencer); Sydney (Strange).

Two specimens, collected by Mr. C. Spencer, of Auckland, are in the Canterbury Museum.

Subgen. EATONIELLA, Dall, 1876.

13. RISSOINA OLIVACEA (Hutton).

Dardania olivacea, Hutton: Trans. New Zealand Inst., vol. xiv, 1882, p. 147, pl. i, fig. K, 1–4.

Rissoina (*Eatoniella*) *olivacea*, Hutton: Proc. Linn. Soc. New South Wales, vol. ix (1885), p. 940.

Jeffreysia (*Dardania*) *olivacea*, Hutton: Tryon, Man. Conch., ser. I, vol. ix, p. 397, pl. lx, fig. 95.

Shell ovate, smooth, dark-brown; whorls 4, convex; lip not continuous. Operculum ovate, subspiral, with a long process from below the nucleus. Long. 2, lat. 1·5 mm.

Hab.—Lyttelton, Auckland, Stewart Island.

Type in the Canterbury Museum, Christchurch.

Genus BARLEEIA, Clark, 1855.

14. BARLEEIA IMPOLITA (Hutton).

Rissoa impolita, Hutton: Cat. Mar. Moll. New Zealand, 1873, p. 29; Proc. Linn. Soc. New South Wales, vol. ix (1885), p. 941.

Barleeia impolita, Hutton: Man. New Zealand Moll., 1880, p. 81.

Shell conoidal, white, not polished; whorls 4, flattened, finely spirally striated; suture small; aperture ovate. Operculum unknown. Long. 2·5, lat. 1·5 mm.

Hab.—Stewart Island.

Type in the Colonial Museum, Wellington.

15. Barleeia rosea (Hutton).

Rissoa rosea, Hutton: Cat. Mar. Moll. New Zealand, 1873, p. 29; Proc. Linn. Soc. New South Wales, vol. ix (1885), p. 941.
Barleeia rosea, Hutton: Man. New Zealand Moll., 1880, p. 81; Tryon, Man. Conch., ser. I, vol. ix, p. 393, pl. lxxi, fig. 6.

Shell ovate, pink, polished, smooth; whorls 4, rather flat; aperture round; lip not continuous. Operculum unknown. Long. 1·75, lat. 1·25 mm.

Hab.—Stewart Island.

Type in the Colonial Museum, Wellington.

16. Barleeia Neozelanica, n.sp. Fig. V. (p. 5.)

Shell minute, ovate-conical, imperforate, subpellucid, white, thin, smooth, shining; whorls 5–5½, flatly convex, suture impressed, channelled, a faint indication of the sutural channel being sometimes seen continued on the periphery of the body-whorl, a few spiral striæ sometimes surround the umbilical area; aperture vertical, oval, lip sharp, rounded at the base, slightly thickened, columella concave, united to the outer lip by a thin callosity. Young specimens are rimate. Operculum unknown. Long. 2, lat. 1·5 mm.

Hab.—Stewart Island (Mr. A. Hamilton).

Type in my collection.

Note.

Rissoa flammulata, Hutton (Journ. de Conch., vol. xxvi, 1878, p. 28), has been transferred by Mr. Pilsbry to the genus *Phasianella*, and the specific name being preoccupied in that genus, he has changed it to *Huttoni* (Man. Conch., ser. I, vol. x, p. 174).

Rissoa limbata, Hutton (New Zealand Journ. Sci., vol. i, 1883, p. 477), I also class under *Phasianella*, to which genus it undoubtedly belongs. I have examined the operculum of one specimen and found it to be white and calcareous.

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[*From the* 'Proceedings of the Malacological Society,' Vol. III, Part 6, October, 1899.]

ANATOMICAL NOTES ON *MEDYLA INSCULPTA* (Pfr.).

By Henry Suter.

Read 9th June, 1899.

Through the kindness of Mr. Laing, of Christchurch, New Zealand, who spent several months on Norfolk Island, I obtained a number of land-shells preserved in formalin, all, with one exception, being

Medyla (Euplecta) insculpta (Pfeiffer).

Helix insculpta, Pfeiffer: Proc. Zool. Soc., 1845, p. 129.

A number of the shells contained the animal, though not in a very good condition for dissection. However, I was able to examine the dentition and the genital organs, of which I propose to give a short account.

Animal.—With two short, broad shell lobes, the left divided into two; the foot (Fig. I) shows distinct diagonal and double parapodial grooves; there is a pronounced caudal pore, situated above the termination of the parapodial pore. The sole is tripartite.

Jaw (Fig. II).—Extremely thin and fragile, transparent, with a strong median projection on the cutting edge, the outline being repeated (as a remnant of an earlier stage of growth) a little higher up.

Radula (Fig. III).—Formula 35–7–1–7–35. The minute outer marginals have an aculeate mesodont, denticulated on its posterior edge, with a small base of attachment; on the succeeding inner teeth the denticles, numbering from three to four, become successively more and more distinct, whilst just a little below the point of the mesodont an ectodont appears, consisting of two cusps, which are at first separate, but subsequently are united at the base. The marginals next gradually assume a triangular shape, and the denticles on the mesodont disappear, whilst the ectodont becomes simple and larger. A few transitional teeth lead to the asymmetrical laterals, each with a short and stout mesocone, extending to the posterior edge of the base, and a rather stout ectodont. The central tooth is tricuspid, the side cusps well developed, and the mesodont of the same length as on the laterals.

Genitalia (Fig. IV).—Simple, the lower portion consisting of a large, muscular, subcylindrical penis sac with a retractor muscle at its posterior end, where also the vas-deferens enters. At the anterior portion of the penis sac, near the atrium, an appendix is inserted which has nearly half the length of the former, and is slightly distended distally. The vagina is formed by a rather large muscular pouch, provided with a tubular receptaculum seminis on the side towards the common orifice, it is slightly bent, and does not widen out posteriorly. In some specimens there was no spermatheca, but only a small papilla in its place; these were, perhaps, immature individuals. The free oviduct is slightly swollen in the middle. In one specimen I found three embryos of different stages of growth embedded in a transparent gelatinous mass, indicating that the species is viviparous.

The dentition and genital organs most nearly resemble those of *Sitala anthropophagorum*, described and figured by Hedley,[1] who mentions the presence of a dart sac, but in his figure only an appendix of the penis, inserted further back than in *M. insculpta*, and a spermatheca are present.

The close relationship between *S. anthropophagorum* and *Medyla insculpta* goes far to support the view expressed by Dr. von Möllendorff[2] that *Kaliella*, *Sitala*, *Coneuplecta*, and *Euplecta* may perhaps be considered as only sections of one genus.

M. insculpta has been removed from *Helix* to *Nanina*, *Zonites*, *Trochomorpha*, and, finally, by Mousson to his genus *Trochonanina*. Dr. von Möllendorff has given good reasons for abandoning Mousson's genus, since it includes a number of now well-defined genera. The proper place for the species is, in my opinion, using Dr. von Möllendorff's latest classification, under the genus *Medyla*, Albers, section *Euplecta*, Semper.

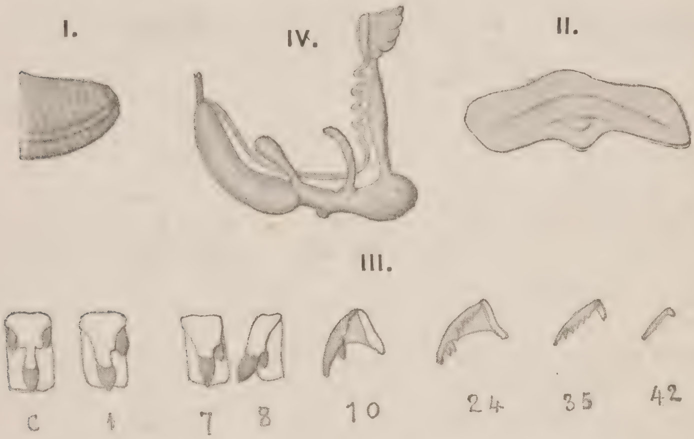

Fig. I. *Medyla insculpta* (Pfr.). Posterior portion of the foot, enlarged.
,, II. ,, ,, ,, Jaw, much magnified.
,, III. ,, ,, ,, Teeth of the radula, greatly magnified.
,, IV. ,, ,, ,, Lower portion of the genitalia, much magnified.

When Pfeiffer described the shell its habitat was unknown, but later on it transpired that it came from Norfolk Island, and my

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[1] Proc. Linn. Soc. New South Wales, ser. II, vol. ix, p. 386, pl. xxv, fig. 21; pl. xxvi, fig. 24.

[2] Bericht Senckenberg. Naturf. Gesell., 1893, p. 65.

specimens are from the same locality. There is, however, one thing that puzzles me: Pfeiffer, in his Nom. Hel. Viv., 1881, p. 57, gives "*Helix basiodon*, Mor. [Siam]" as a synonym. He gives the habitat of *insculpta* as "Ins. Norfolk," "Siam" being only mentioned in brackets after the synonym. Tryon, on the other hand (Man. Conch., ser. II, vol. ii, p. 48), has the habitat: "Ins. Norfolk, ? Siam." It seems to me hardly possible that the same species should occur in two such widely separated localities, and I am confident that some member of our Society will kindly clear up this doubtful point. Was Morelet mistaken about the habitat when creating his species?

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[TRANSACTIONS OF THE NEW ZEALAND INSTITUTE, VOL. XXXIII.]

Art. XII.—*Further Contributions to the Geographical Distribution of the New Zealand Non-marine Mollusca.*

By Henry Suter.

[*Read before the Auckland Institute, 15th October, 1900.*]

No. I. Shells collected near Birch Hill Station, Wairau, Province of Nelson, by Mr. Edward Suter.

No. II. Shells from Happy Valley, near Motanau, Canterbury, by Mr. Fritz Suter. Of special interest is the occurrence of *Flammulina virescens*, *Endodonta tau*, *wairarapa*, *mutabilis*, and *novoseelandica*, the latter having been known from the North Island only.

No. III. Mr. A. Hamilton, of Dunedin, collected some shells near Ngaputahi, Urewera country. Most of the shells were in a bad condition, and their identification not easy. *Endodonta varicosa* I had hitherto only seen from Taranaki and the South Island, and amongst the lot I found a new species, *Endodonta (Ptychodon) ureweraensis* (Suter, Journal of Malacology, 1899, vol. vii., p. 53, pl. iii., figs. 7–10).

No. IV. A few land-shells collected near Otarama, Canterbury, by Mr. Alf. Suter.

No. V. Shells collected by Mr. Charles Cooper, of Auckland, on Chicken Island.

The localities Nos. III. and V. were up to the present a *terra incognita* conchologically, and I am much indebted to my two friends for presenting to me the whole of their harvest.

——	I.	II.	III.	IV.	V.
Fam. *Limnæidæ.*					
Isidora variabilis, *Gray*	x	...	...	...	...
Fam. *Rhytididæ.*					
Rhytida meesoni, *Suter*	x	...	...	...	...
Rhenea coresia, *Gray*	...	...	...	...	x
Fam. *Phenacohelicidæ.*					
Genus *Flammulina.*					
Phacussa hypopolia, *Pfeiffer*	x	...	...	...	...
Thalassohelix zelandiæ, *Gray*	...	...	x	...	...
〃 ziczac, *Gould*	...	...	x	...	...
〃 igniflua, *Reeve*	...	x	...	...	...
Allodiscus dimorpha, *Pfeiffer*	...	...	...	...	x
〃 tullia, *Gray*	...	...	x	...	...
〃 granum, *Pfeiffer*	...	...	...	x	...
〃 planulata, *Hutton*	...	...	...	x	...

——	I.	II.	III.	IV.	V.
Pyrrha virescens, *Suter*	...	x	...	...	...
Therasia celinde, *Gray*	...	...	x	...	...
" decidua, *Pfeiffer*	...	x	...	...	x
" traversi, *E. A. Smith*	...	...	x	...	...
Phenacohelix lucetta, *Hutton*	x	...	...	...	...
Suteria ide, *Gray*	x	...	x	...	...
Flammulina zebra, *Le Guillou*	...	x	...	...	...
" crebriflammis, *Pfeiffer*	x	x	...	...	...
" perdita, *Hutton*	...	...	x	...	...
" pilsbryi, *Suter*	...	x	x	...	...
Fam. *Laomidæ.*					
Genus *Laoma.*					
Phrixgnathus mariæ, *Gray*	...	...	x	...	...
" ariel, *Hutton*	...	...	x	...	...
" phrynia, *Hutton*	...	x	...	...	x
" allochroida, *var.* lateumbilicata, *Suter*	...	...	...	...	x
Fam. *Patulidæ.*					
Genus *Endodonta.*					
Thaumatodon varicosa, *Pfeiffer*	...	...	x	...	...
" tau, *Pfeiffer*	...	x	...	...	...
Ptychodon wairarapa, *Suter*	...	x	...	...	...
" ureweraensis, *Suter*	...	...	x	...	...
Phenacharopa novoseelandica, *Pf.*	...	x	...	...	...
Charopa coma, *Gray*	x	x	...	x	...
" " " *var.* globosa, *Suter*	...	...	x	...	...
" buccinella, *Reeve*	...	...	x	...	...
" anguiculus, *Reeve*	...	x	...	x	...
" " " *var.* montivaga, *Suter*	...	x	x	x	...
" corniculum, *Reeve*	...	...	x	...	...
" infecta, *Reeve*	x	...	...	...	...
" caput spinulæ, *Reeve*	...	x	x	...	...
" bianca, *Hutton*	...	...	x	...	...
" tapirina, *Hutton*	...	...	x	...	...
" sterkiana, *Suter, var.*	x	...	...	...	...
" mutabilis, *Suter*	...	x	...	...	...
" subinfecta, *Suter*	...	x	...	...	...
Fam. *Bulimulidæ.*					
Placostylus hongii, *Lesson, em.* (shongii)	...	...	...	...	x
Fam. *Unionidæ.*					
Unio menziesi, *Gray, var.* rugata, *Hutton*	x	...	...	...	...

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ARTICLE XXII.

Art. XXII.—*On the Land Mollusca of Little Barrier Island.*

By Henry Suter.

[*Read before the Auckland Institute, 7th October, 1901.*]

In the Christchurch *Press* of the 21st November, 1892, some notes on Little Barrier Island were published *re* the visits of Messrs. Henry Wright and Boscawen, of the Lands Department, the notes being probably quoted from the *New Zealand Herald*. There occurs the following passage: "He (Mr. Boscawen) also found the pupurangi, or New Zealand snail (*Helix busbyi*), which is about 4 in. or 5 in. long, and lays an egg like that of a bird." It is curious that Mr. Shakespear, the curator of Little Barrier Island, has never found this large snail, nor has Mr. Cheeseman, on his repeated visits to the island, come across it. Possibly Mr. Boscawen's specimen was "the last of the Mohicans." Be this as it may, the fact remains that up to the end of the last century nothing else was known about the land molluscan fauna of Little Barrier Island.

In January last Mr. J. Adams, of the Thames, was paying a visit to the island, and, knowing him to be a very good collector of land-shells, I asked him to have a good look out for these mostly minute and inconspicuous creatures. On Mr. Adams's return he kindly handed over to me the harvest of his collecting, which enables me now to publish the first list of land-shells from this our native reserve. To Mr. Adams I wish to express my gratitude for the great trouble he has taken to get this nice and interesting collection together. No new species were amongst these shells, which belong to four genera and represent twelve species. There is little doubt but that further collecting will produce many additions to the list.

Fam. RHYTIDIDÆ.

(1.) **Rhenea coresia,** Gray.

Distribution.—North Island only, but more common in the northern part of it. It is not uncommon in the bush near Auckland, and occurs also on Chicken Island.

Fam. PHENACOHELICIDÆ.

(2.) **Flammulina (Allodiscus) urquharti,** Suter.

Distribution.—This minute brown shell is, no doubt, easily overlooked; and, on the other side, it must be mentioned that all the species of the subgenus *Allodiscus* are not common shells at all. The type was found on Mount Pirongia, and specimens from the Hunua Range are also in my collection. North Island only.

(3.) **Flammulina (Therasia) celinde,** Gray.

Distribution.—A fairly common shell in the northern parts of the North Island, but has not been found on it further south than the Urewera country. In the South Island it was found in Happy Valley, Canterbury, where also *Phenacharopa novoseelandica*, Pfr., occurs.

(4.) **Flammulina (Therasia) decidua**, Pfeiffer.

Distribution.—Found from Auckland to Otago. This is one of the very few New Zealand snails I have seen leaving its hiding-place after a warm rain and crawling up on shrubs with smooth bark, or devoid of it.

(5.) **Flammulina (Suteria) ide**, Gray.

Distribution.—Occurs over the entire North Island, in moist situations of the bush, and the northern part of the South Island. Its southernmost limit is, to my knowledge, near Lake Mahinapua, where it was found by Dr. A. Dendy.

(6.) **Flammulina (s. str.) pilsbryi**, Suter.

Distribution.—Like most minute forms, this species is widely distributed over New Zealand, and is found on both Islands. In the South Island I found it near the Mueller Glacier in some native bush.

Fam. LAOMIDÆ.

(7.) **Laoma (s. str.) pœcilosticta,** Pfeiffer.

Distribution.—This is a North Island shell, not uncommon in the bush near Auckland, but rare in the southern parts. It is one of the few specifically northern species that has reached the South Island, as specimens were found in Marlborough.

(8.) **Laoma (Phrixgnathus) glabriuscula,** Pfeiffer.

Distribution.—Hitherto only known from Auckland Province, Hawke's Bay, and Taranaki, in the North Island, but, like the foregoing species, also from Marlborough.

(9.) **Laoma (Phrixgnathus) phrynia,** Hutton.

Distribution.—This rather rare species has been found from Whangarei to the Seventy-mile Bush, in the North Island; Marlborough, Nelson, Canterbury, and Hooker Valley, in the South Island; and a variety on Stewart Island.

(10.) **Laoma (Phrixgnathus) allochroida,** var. **lateumbilicata,** Suter.

Distribution.—A very minute form, living in mould in the bush, and hitherto only known from Auckland to the Forty-mile Bush, in the North Island; also from Chicken Island.

Fam. PATULIDÆ.

(11.) **Endodonta (Charopa) coma,** Gray.

Distribution.—This is the only one of our land-shells that can be called common. It is found almost everywhere in the North Island, also on the Great Barrier Island. In the South Island it is, to my knowledge, not found south of the 44th degree of latitude; in the east, towards Banks Peninsula, it is replaced by *Endodonta pseudocoma*, Sut.

(12.) **Endodonta (Charopa) colensoi,** Suter.

Distribution.—The type is from the Forty-mile Bush, and it has also been found near Auckland, and in Hawke's Bay, Waipawa, and Manawatu. Unknown from the South Island.

Thus it will be seen that most of the shells brought from Little Barrier Island are rather widely distributed in our colony.

With regard to the distribution of the genera, I may just mention that *Rhenea*, comprising small carnivorous snails, occurs as far as Queensland, New Caledonia, and one species (*R. gradata*, Gould) on the Tonga Islands. *Flammulina* is also found in Tasmania, Australia, Lord Howe Island, Norfolk Island, New Caledonia, and the Carolines; and nearly allied to it are *Amphidoxa* and *Stephanoda*, from South America, and *Trachycystis*, from South Africa. Once the anatomy of these genera is well known, they will most likely prove to form only one genus. *Laoma*, subgenus *Phrixgnathus*, is also known from Tasmania and southern Australia, but *Laoma* (restricted) is only found in New Zealand. To the same family belongs the genus *Punctum*, which occurs in North America, Europe, part of Asia, and northern Africa. *Endodonta*, a Polynesian genus, occurs also in Tasmania, Australia, New Caledonia, the Philippine Islands, and over the Polynesian islands as far as the Hawaiian and Society Islands.

[TRANSACTIONS OF THE NEW ZEALAND INSTITUTE, VOL. XXXIV.]

ART. XXIII.—*List of the Species described in F. W. Hutton's Manual of the New Zealand Mollusca, with the Corresponding Names used at the Present Time.*

By HENRY SUTER.

[*Read before the Auckland Institute, 7th October, 1901.*]

SINCE the publication of the Manual in 1880 considerable changes in nomenclature have taken place, and for many species the New Zealand habitat has proved to be erroneous. The writer has thought that it might be useful to students in conchology to publish the present list. The chief work has been done by Captain Hutton himself in his revisions published in the "Proceedings of the Linnæan Society of New South Wales," which, however, are not always available to New Zealand workers in conchology.

In the first column the names are given in order of the Manual:—

Page
1. Octopus maorum, *Hutt.* = O. maorum, *Hutt.*
2. Pinnoctopus cordiformis, *Q. and G.* = P. cordiformis, *Q. and G.*
2. Argonauta tuberculata, *Shaw* = A. nodosa, *Solander.*
3. Onychoteuthis bartlingii, *Lesueur* = O. banksii, *Leach.*
3. Ommastrephes sloanii, *Gray* = Todarodes sloanii, *Gray.*
3. Sepioteuthis lessoniana, *Fér.* = S. lessoniana, *Fér.*
3. Sepioteuthis bilineata, *Q. and G.* = S. bilineata, *Q. and G.*
4. Spirula peronii, *Lam.* = S. peronii, *Lam.*
5. Patula chordata, *Pfr.* = Flammulina (Phenacohelix) chordata, *Pfr.*
6. Patula iota, *Pfr.* = Flammulina (Phenacohelix) pilula, *Reeve.*
6. Patula dimorpha, *Pfr.* = Flammulina (Allodiscus) dimorpha, *Pfr.*
6. Patula hypopolia, *Pfr.* = Flammulina (Phacussa) hypopolia, *Pfr.*
6. Patula decidua, *Pfr.* = Flammulina (Therasia) decidua, *Pfr.*
6. Patula celinde, *Gray* = Flammulina (Therasia) celinde, *Gray.*
7. Patula ziczac, *Gould* = Flammulina (Thalassohelix) ziczac, *Gould.*
7. Patula kappa, *Pfr.* = Flammulina (Thalassohelix) ziczac, *Gould.*

Page
7. Patula varicosa, *Pfr.* = Endodonta (Thaumatodon) varicosa, *Pfr.*
7. *Patula tiara*, Mighels, *not New Zealand (Hawaiian Islands).*
8. Patula coma, *Gray* = Endodonta (Charopa) coma, *Gray.*
8. Patula tau, *Pfr.* = Endodonta (Thaumatodon) tau, *Pfr*
8. Patula gamma, *Pfr.* = Endodonta (Charopa) buccinella, *Reeve.*
8. Patula egesta, *Gray* = Endodonta (Charopa) egesta, *Gray.*
9. Patula obnubila, *Reeve* = Flammulina (Thalassohelix) igniflua, *Reeve, var.* obnubila, *Reeve.*
9. Patula anguiculus, *Reeve* = Endodonta (Charopa) anguiculus, *Reeve.*
9. Patula ide, *Gray* = Flammulina (Suteria) ide, *Gray.*
9. Patula eta, *Pfr.* = Endodonta (Charopa) corniculum, *Reeve.*
9. Patula zeta, *Pfr.* = Endodonta (Charopa) infecta, *Reeve.*
10. Patula venulata, *Pfr.* = Flammulina (Allodiscus) venulata, *Pfr.*
10. Patula portia, *Gray* = Flammulina (Thalassohelix) ziczac, *Gould.*
10. Patula omega, *Pfr.* = Flammulina (s. str.) compressivoluta, *Reeve.*
11. Patula tullia, *Gray* = Flammulina (Allodiscus) tullia, *Gray.*
11. Patula lambda, *Pfr.* = Flammulina (Thalassohelix) igniflua, *Reeve.*
11. Patula biconcava, *Pfr.* = Endodonta (Charopa) biconcava, *Pfr.*
12. Vitrina dimidiata, *Pfr.* = Otoconcha dimidiata, *Pfr.*
12. Vitrina zebra, *Le Guillou* = Flammulina (s. str.) zebra, *Le Guill.*
12. Daudebardia novoseelandica, *Pfr.* = Schizoglossa novoseelandica, *Pfr.*
12. Hyalina corneo-fulva, *Pfr.* = ~~Vitrea~~ Hyalinia cellaria, *Müller (introduced).*
13. Hyalina novaræ, *Pfr.* = Xesta novaræ, *Pfr.*
13. Succinea tomentosa, *Pfr.* = Limnæa tomentosa, *Pfr.*
14. Tornatellina novoseelandica, *Pfr.* = Tornatellina novoseelandica, *Pfr.*
14. Placostylus bovinus, *Brug.* = Placostylus hongii, *Lesson.*
14. Placostylus novoseelandicus, *Pfr.* = Placostylus hongii, *var.* novoseelandica, *Pfr.*
15. Placostylus antipodum, *Gray* = Cochlostyla fulgetrum, *Brod. (introduced).*
15. Pupa novoseelandica, *Pfr.* = Endodonta (Phenacharopa) novoseelandica, *Pfr.*

Page
16. *Helix (Rhagada) reinga*, Gray, *not New Zealand (Australia).*
16. Helix (Rhytida) greenwoodi, *Gray* = Rhytida greenwoodi, *Gray.*
16. Helix (Rhytida) dunniæ, *Gray* = Rhytida dunniæ, *Gray.*
17. Helix (Thalassia) regularis, *Pfr.* = Laoma (Phrixgnathus) regularis, *Pfr.*
17. Helix (Thalassia) heldiana, *Pfr.* = Laoma (Phrixgnathus) erigone, *Gray.*
17. Helix (Thalassia) conella, *Pfr.* = Laoma (Phrixgnathus) conella, *Pfr.*
17. Helix (Thalassia) pœcilosticta, *Pfr.* = Laoma (s. str.) pœcilosticta, *Pfr.*
18. Helix (Thalassia) erigone, *Gray* = Laoma (Phrixgnathus) erigone, *Gray.*
18. Helix (Thalassia) alpha, *Pfr.* = Endodonta (Æschrodomus) stipulata, *Reeve.*
18. Helix (Thalassia) beta, *Pfr.* = Endodonta (Æschrodomus) barbatula, *Reeve.*
18. Helix (Thalassia) ophelia, *Pfr.* = Flammulina (Therasia) ophelia, *Pfr.*
19. Helix (Thalassia) zealandiæ, *Gray* = Flammulina (Thalassohelix) zelandiæ, *Gray.*
19. Helix (Thalassia) fatua, *Pfr.* = Laoma (Phrixgnathus) fatua, *Pfr.*
19. Helix (Thalassia) antipoda, *H. and J.* = Flammulina (Thalassohelix) zelandiæ, *Gray*, *var.* antipoda, *H. and J.*
19. Helix (Thalassia) aucklandica, *Le Guill.* = Flammulina (? Thalassohelix) aucklandica, *Le Guill.*
19. Helix (Thalassia) sciadium, *Pfr.* = Laoma (Phrixgnathus) sciadium, *Pfr.*
20. Helix (Thalassia) irradiata, *Gould* = Flammulina (Carthæa) kivi, *Gray.*
20. Helix(?) kivi, *Gray* = Flammulina (Carthæa) kivi, *Gray.*
20. Helix granum, *Pfr.* = Flammulina (Allodiscus) granum, *Pfr.*
20. *Helix guttula*, Pfr., *not New Zealand.*
21. Laoma leimonias, *Gray* = Laoma (s. str.) leimonias, *Gray.*
21. Paryphanta busbyi, *Gray* = Paryphanta busbyi, *Gray.*
22. Paryphanta hochstetteri, *Pfr.* = Paryphanta hochstetteri, *Pfr.*
22. Paryphanta urnula, *Pfr.* = Paryphanta urnula, *Pfr.*
22. Paryphanta phlogophora, *Pfr.* = Flammulina (s. str.) zebra, *Le Guill.*
23. Paryphanta glabriuscula, *Pfr.* = Laoma (Phrixgnathus) glabriuscula, *Pfr.*

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23. Paryphanta epsilon, *Pfr.* = Endodonta (Charopa) caputspinulæ, *Reeve.*
23. Paryphanta chiron, *Gray* = Flammulina (s. str.) chiron, *Gray.*
23. *Paryphanta rapida*, Pfr., *not New Zealand.*
24. Paryphanta crebriflammis, *Pfr.* = Flammulina (s. str.) crebriflammis, *Pfr.*
24. Paryphanta jeffreysiana, *Pfr.* = Rhenea jeffreysiana, *Pfr.*
24. Paryphanta coresia, *Gray* = Rhenea coresia, *Gray.*
25. Nanina mariæ, *Gray* = Laoma (Phrixgnathus) mariæ, *Gray.*
25. Limax molestus, *Hutt.* = Limax agrestis, *L. (introduced).*
26. Milax antipodum, *Pfr.* = Amalia gagates, *Drap. (introduced).*
26. Milax emarginatus, *Hutt.* = Amalia gagates, *Drap. (introduced).*
26. Arion incommodus, *Hutt.* = Arion fuscus, *Müll. (introduced).*
27. Janella bitentaculata, *Q. and G.* = Athoracophorus bitentaculatus, *Q. and G.*
27. Konophora marmorea, *Hutt.* = Athoracophorus (Konophora) marmorea, *Hutt.*
28. Onchidella patelloides, *Q. and G.* = Oncidiella patelloides, *Q. and G.*
28. Onchidella nigricans, *Q. and G.* = Oncidiella nigricans, *Q. and G.*
28. Onchidella irrorata, *Gould* = Oncidiella irrorata, *Gould.*
29. Latia neritoides, *Gray* = Latia neritoides, *Gray.*
29. Latia lateralis, *Gould* = Latia neritoides, *var.* lateralis, *Gould.*
29. *Physa wilsoni*, Tryon, *not New Zealand.*
30. „ antipodea, *Sow.* = Isidora antipodea, *Sow.*
30. „ *gibbosa*, Gould, *not New Zealand (Australia).*
30. „ guyonensis, *T.-Woods* = Isidora variabilis, *Gray.*
30. „ novæ-zealandiæ, *Sow.* = Isidora variabilis, *Gray.*
30. „ tabulata, *Gould* = Isidora tabulata, *Gould.*
31. „ variabilis, *Gray* = Isidora variabilis, *Gray.*
31. „ mœsta, *Adams* = Isidora tabulata, *Gould.*
31. „ lirata, *T.-Woods* = Isidora tabulata, *Gould.*
31. „ *cumingii*, Ad., *not New Zealand (Australia).*
32. Planorbis corinna, *Gray* = Planorbis corinna, *Gray.*
32. *Melampus commodus*, Ad., *not New Zealand.*
32. „ *zealandicus*, Ad., *not New Zealand.*
33. *Tralia costellaris*, Ad., *not New Zealand.*
33. „ *adamsianus*, Pfr., *not New Zealand.*
34. Ophicardelus australis, *Q. and G.* = Tralia (Ophicardelus) australis, *Q. and G.*
34. Marinula filholi, *Hutt.* = Marinula filholi, *Hutt.*

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34. Leuconia obsoleta, *Hutt.* = Leuconopsis obsoleta, *Hutt.*
35. Amphibola avellana, *Chemn.* = Amphibola crenata, *Martyn.*
35. *Amphibola quoyana*, P. and M., *not New Zealand (Australia).*
36. Siphonaria obliquata, *Sow.* = Siphonaria obliquata, *Sow.*
36. Siphonaria sipho, *Sow.* = Siphonaria zelandica, *Q. and G.*
36. Siphonaria cancer, *Reeve* = Siphonaria zelandica, *Q. and G.*
36. Siphonaria australis, *Q. and G.* = Siphonaria australis, *Q. and G.*
36. *Siphonaria spinosa*, Reeve, *not New Zealand (Natal).*
36. Siphonaria redimiculum, *Reeve* = Siphonaria tristensis, *Leach.*
37. Gadinia nivea, *Hutt.* = Gadinia nivea, *Hutt.*
37. Cyclophorus lignarius, *Pfr.* = Lagochilus lignarius, *Pfr.*
37. „ cytora, *Gray* = Lagochilus cytora, *Gray.*
latw= 38. Paxillus peregrina, *Gould* = ~~Paxillus~~ peregrinus, *Gould.*
tychia 38. Diplommatina chordata, *Pfr.* = Palaina chordata, *Pfr.*
39. Realia hochstetteri, *Pfr.* = Realia hochstetteri, *Pfr.*
39. „ egea, *Gray* = Realia egea, *Gray.*
39. „ turriculata, *Pfr.* = Realia turriculata, *Pfr.*
39. „ carinella, *Pfr.* = Realia carinella, *Pfr.*
40. Omphalotropis vestita, *Pfr.* = Omphalotropis vestita, *Pfr.*
40. Assiminea purchasi, *Pfr.* = Hydrocena purchasi, *Pfr.*
41. *Conus zealandicus*, Hutt., *not New Zealand (Australia)* = C. anemone.
42. Acus kirki, *Hutt.* = Terebra tristis, *Desh.*
42. Pleurotoma buchanani, *Hutt.* = Surcula trailli, *Hutt.*
42. Pleurotoma trailli, *Hutt.* = Surcula trailli, *Hutt.*
43. Pleurotoma zealandica, *Smith* = Surcula cheesemani, *Hutt.*
43. Pleurotoma antipodum, *Smith* = Surcula albula, *Hutt.*
43. Pleurotoma albula, *Hutt.* = Surcula albula, *Hutt.*
43. Drillia novæ-zealandiæ, *Reeve* = Surcula novæ-zealandiæ, *Reeve.*
44. Drillia lævis, *Hutt.* = Drillia lævis, *Hutt.*
44. „ maorum, *Smith* = Surcula trailli, *Hutt.*
44. „ *æmula*, Ang., *not New Zealand (Australia).*
44. „ cheesemani, *Hutt.* = Surcula cheesemani, *Hutt.*
45. Lachesis sulcata, *Hutt.* = Columbella sulcata, *Hutt.*
45. Defranchia luteo-fasciata, *Reeve* = Clathurella sinclairi, *Smith.*
45. Daphnella cancellata, *Hutt.* = Daphnella lymneiformis, *Kiener.*
46. Cancellaria trailli, *Hutt.* = Cancellaria trailli, *Hutt.*
46. „ *ampullacera*, Less., *not New Zealand.*

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46. Murex zealandicus, *Q. and G.* = Murex zelandicus, *Q. and G.*
47. Murex octogonus, *Q. and G.* = Murex octogonus, *Q. and G.*
47. Murex angasi, *Crosse* = Murex angasi, *Crosse.*
47. Murex candida, *H. and A. Ad.* = Trophon ambiguus, *Phil.*
47. *Typhis cleryi*, Petit, *not New Zealand (Australia).*
48. Trophon ambiguus, *H. and J.* = Trophon ambiguus, *Phil.*
48. Trophon stangeri, *Gray* = Trophon stangeri, *Gray.*
48. *Trophon incisus*, Gould, *not New Zealand (California).*
48. Trophon inferus, *Hutt.* = Trophon inferus, *Hutt.*
49. Trophon dubius, *Hutt.* = Taron dubius, *Hutt.*
49. Trophon paivæ, *Crosse* = Trophon paivæ, *Crosse.*
49. Trophon duodecimus, *Gray* = Trophon duodecimus, *Gray.*
49. Trophon spiratum, *H. and A. Ad.* = Trophon stangeri, *Gray.*
49. *Trophon coronatum*, H. and A. Ad., *not New Zealand (Japan).*
50. Fusus spiralis, *Ad.* = Fusus spiralis, *Ad.*
50. Neptunæa zealandica, *Q. and G.* = Siphonalia mandarina, *Duclos.*
50. Neptunæa caudata, *Q. and G.* = Siphonalia mandarina, *var.* caudata, *Q. and G.*
50. Neptunæa dilatata, *Q. and G.* = Siphonalia dilatata, *Q. and G.*
50. Neptunæa nodosa, *Mart.* = Siphonalia nodosa, *Mart.*
51. Neptunæa traversi, *Hutt.* = Euthria lineata, *var.* traversi, *Hutt.*
51. Euthria lineata, *Chemn.* = Euthria lineata, *Martyn.*
51. Euthria vittata, *Q. and G.* = Euthria vittata, *Q. and G.*
52. Euthria bicincta, *Hutt.* = Euthria vittata, *Q. and G.*
52. Euthria littorinoides, *Reeve* = Euthria littorinoides, *Reeve.*
52. Euthria martensiana, *Hutt.* = Euthria martensiana, *Hutt.*
52. Euthria antarctica, *Reeve* = Euthria antarctica, *Reeve.*
53. Cominella maculata, *Mart.* = Cominella maculata, *Mart.*
53. Cominella testudinea, *Chemn.* = Cominella testudinea, *Chemn*
53. Cominella nassoides, *Reeve* = Cominella nassoides, *Reeve.*
53. Cominella lineolata, *Lam.* = Cominella virgata, *Adams.*
54. „ lurida, *Phil.* = Cominella lurida, *Phil.*
54. „ huttoni, *Kob.* = Cominella huttoni, *Kob.*
54. „ melo, *Less.* = Cominella maculata, *Mart.*
54. „ funerea, *Gould* = Cominella lurida, *Phil.*

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54. Cominella quoyi, *Kiener* = Cominella virgata, *Ad.*
54. " lactea, *Reeve* = Cominella lineolata, *Lam.*
55. *Nassa rutilans*, Reeve, *not New Zealand (Australia).*
55. *Nassa nigella*, Reeve, *not New Zealand (Australia).*
55. *Nassa novæ-zealandiæ*, Reeve, *not New Zealand (Philippines).*
55. *Nassa corticata*, Ad., *not New Zealand (Australia).*
56. Purpura haustrum, *Mart.* = Purpura haustrum, *Mart.*
56. Polytropa textiliosa, *Lam.* = Purpura succincta, *Lam.*
56. Polytropa succincta, *Lam.* = Purpura succincta, *Lam.*
56. Polytropa striata, *Mart.* = Purpura striata, *Mart.*
56. Polytropa squamata, *Hutt.* = Purpura striata, *var.* squamata, *Hutt.*
57. Polytropa retiaria, *Hutt.* = Trophon stangeri, *Gray.*
57. Polytropa quoyi, *Reeve* = Trophon stangeri, *Gray.*
57. Polytropa scobina, *Q. and G.* = Purpura scobina, *Q. and G.*
57. Polytropa patens, *H. and J.* = Trophon patens, *H. and J.*
57. Polytropa biconica, *Hutt.* = Purpura scobina, *var.* albomarginata, *Desh.*
57. Purpura tesselliata, *Less.*, *not again recognised.*
58. *Ricinula iodostoma*, Less., *not New Zealand (Polynesia).*
58. Ancillaria australis, *Sow.* = Ancilla australis, *Sow.*
59. Ancillaria pyramidalis, *Reeve* = Ancilla pyramidalis, *Reeve.*
59. Coriocella ophione, *Gray* = Marsenia ophione, *Gray.*
60. *Latirus decoratus*, Ad., *not New Zealand (Andaman Islands).*
60. Mitra obscura, *Hutt.* = Mitra obscura, *Hutt.*
60. " rubiginosa, *Hutt.* = Vulpecula rubiginosa, *Hutt.*
61. *Columbella zebra*, Gray, *not New Zealand (Polynesia, &c.).*
61. Columbella choava, *Reeve* = Columbella choava, *Reeve.*
61. Voluta pacifica, *Lam.* = Scaphella pacifica, *Lam.*
62. Voluta gracilis, *Swains.* = Scaphella gracilis, *Swains.*
62. *Voluta kirki*, Hutt., *not New Zealand* (Vol. flavicans, *Gmel.*).
62. Marginella albescens, *Hutt.* = Marginella infans, *Reeve.*
63. " *vittata*, Hutt., *not New Zealand.*
63. Erato lactea, *Hutt.* = Marginella muscaria, *Lam.*
63. Tritonium australis, *Lam.* = Lotorium nodiferum, *Lam.*
64. Tritonium spengleri, *Chemn.* = Lotorium spengleri, *(Chemn.) Lam.*
64. Tritonium olearium, *L.* = Lotorium olearium, *L.*
64. *Tritonium fusiformis*, Kien., *not New Zealand (Australia).*
64. Ranella leucostoma, *Lam.* = Apollo (leucostomus, *Lam.*) australasia Perry
65. " vexillum, *Sow.* = Apollo argus, *Gmel.*
65. Dolium variegatum, *Lam.* = Dolium variegatum, *Lam.*

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66. Cassis pyrum, *Lam.* = Semicassis ~~achatina, var~~. pyrum, *Lam.*
66. Cassis achatina, *Lam.* = Semicassis achatina, *Lam.*
66. *Cypræa punctata*, L., *not New Zealand (Philippines).*
67. Trivia australis, *Lam.* = Trivia australis, *Lam.*
67. „ coccinella, *Lam.* = Trivia europæa, *Montagu.*
67. Struthiolaria papulosa, *Mart.* = Struthiolaria papulosa, *Mart.*
68. Struthiolaria australis, *Gmel.* = Struthiolaria vermis, *Mart.*
68. Struthiolaria inermis, *Sow.* = Struthiolaria vermis, *Mart.*
68. Struthiolaria tricarinata, *Less.* = Struthiolaria tricarinata, *Less.*
69. Trichotropis inornata, *Hutt.* = Trichotropis inornata, *Hutt.*
69. Scalaria zelebori, *Frfld.* = Scalaria zelebori, *Frfld.*
70. „ lyra, *Sow.* = Scalaria tenella, *Hutt.*
70. Philippia lutea, *Lam.* = Solarium luteum, *Lam.*
71. Janthina communis, *Lam.* = Janthina fragilis, *Lam.*
71. „ iricolor, *Reeve* = Janthina globosa, *Swains.*
71. „ exigua, *Lam.* = Janthina exigua, *Lam.*
71. Natica zealandica, *Q. and G.* = Natica zelandica, *Q. and G.*
72. Lunatia australis, *Hutt.* = Natica australis, *Hutt.*
72. „ vitrea, *Hutt.* = Natica vitrea, *Hutt.*
72. Obeliscus roseus, *Hutt.* = Pyramidella rosea, *Hutt.*
72. Chemnitzia zealandica, *Hutt.* = Turbonilla zealandica, *Hutt.*
73. Odostomia lactea, *Ang.* = Odontostom~~i~~a angasi, *Tryon.*
73. Eulima chathamensis, *Hutt.* = Rissoina rugulosa, *Hutt.*
74. Cerithidea alternata, *Hutt.* = Potamides alternatus, *Hutt.*
74. Cerithidea bicarinata, *Gray* = Potamides bicarinatus, *Gray.*
74. Cerithidea nigra, *H. and J.* = Potamides subcarinatus, *Sow.*
74. Bittium terebelloides, *Mts.* = Cerithiopsis terebelloides, *Mts.*
75. Bittium exilis, *Hutt.* = Bittium exile, *Hutt.*
75. Triphoris angasi, *Crosse* = Triforis angasi, *Crosse.*
75. Triphoris gemmulatus, *Ad. and Reeve* = Triforis gemmulatus, *Ad. and Reeve.*
78. Melanopsis trifasciata, *Gray* = Melanopsis trifasciata, *Gray.*
78. Melanopsis strangei, *Reeve* = Melanopsis trifasciata, *Gray.*
78. Littorina cincta, *Q. and G.* = Littorina cincta, *Q. and G.*
79. „ cœrulescens, *Lam.* = Littorina mauritiana, *Lam.*

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79. Littorina luctuosa, *Reeve* = Littorina cincta, *Q. and G.*
79. „ *novæ-zealandiæ*, Reeve, *not New Zealand.*
79. Risella melanostoma, *Gmel.* = Risella melanostoma, *Gmel.*
79. Fossarina varius, *Hutt.* = Fossarina varia, *Hutt.*
80. Rissoina plicata, *Hutt.* = Rissoia (plicata, *Hutt.*) cheilostoma, T.-W
80. „ rugulosa, *Hutt.* = Rissoina rugulosa, *Hutt.*
80. „ purpurea, *Hutt.* = Rissoia subfusca, *Hutt.*
80. „ subfusca, *Hutt.* = Rissoia subfusca, *Hutt.*
80. „ fasciata, *Ad.* = Rissoina fasciata, *A. Ad.*
81. Barleeia flamulata, *Hutt.* = Phasianella huttoni, *Pilsbry.*
81. „ rosea, *Hutt.* = Barleeia rosea, *Hutt.*
81. „ nana, *Hutt.* = Rissoia huttoni, *Sut.*
81. „ impolita, *Hutt.* = Odontostom~~i~~a impolita, *Hutt.*
81. Bythinella antipoda, *Gray* = Potamopyrgus antipodum, *Gray.*
81. Bythinella zealandiæ, *Gray* = P. antipodum, *var.* zealandiæ, *Gray.*
82. Bythinella egena, *Gould* = P. antipodum, *var.* egena, *Gould.*
82. Bythinella spelæa, *Frfld.* = Potamopyrgus spelæus, *Frfld.*
82. Bythinella fisheri, *Dkr.* = Potamopyrgus corolla, *Gould.*
82. Bythinella badia, *Gould* = Potamopyrgus corolla, *Gould.*
82. Bythinella reevei, *Frfld.* = Potamopyrgus corolla, *Gould.*
83. Potamopyrgus corolla, *Gld.* = Potamopyrgus corolla, *Gould.*
83. Turritella rosea, *Q. and G.* = Turritella rosea, *Q. and G.*
84. „ vittata, *Hutt.* = Turritella vittata, *Hutt.*
84. „ fulminata, *Hutt.* = Turritella fulminata, *Hutt.*
84. „ pagoda, *Reeve* = Turritella pagoda, *Reeve.*
84. Eglisia symmetrica, *Hutt.* = Turritella kanieriensis, *Harris.*
85. Siphonium lamellosum, *Hutt.* = Vermicularia lamellosa, *Hutt.*
85. Cladopoda zealandica, *Q. and G.* = Vermicularia zelandica, *Q. and G.*
85. Stephopoma roseum, *Q. and G.* = Vermicularia rosea, *Q. and G.*
86. Siliquaria australis, *Q. and G.* = Tenagodes australis, *Q. and G.*
86. Trochita scutum, *Less.* = Calyptræa scutum, *Less.*
86. Trochita novæ-zelandiæ, *Less.* = Calyptræa maculata, *Q. and G.*
87. Crypta costata, *Desh.* = Crepidula aculeata, *Gmel.*
87. „ monoxyla, *Less.* = Crepidula monoxyla, *Less.*
87. „ unguiformis, *Lam.* = Crepidula crepidula, *L.*
88. Hipponyx australis, *Lam.* = Hipponyx *sp.*

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88. Acmæa pileopsis, *Q. and G.* = Acmæa pileopsis, *Q. and G.*

88. „ cantharus, *Reeve* = Acmæa cantharus, *Reeve.*

88. „ fragilis, *Chemn.* = Acmæa fragilis, *Chemn.*

89. „ corticata, *Hutt.* = Acmæa corticata, *Hutt.*

89. Nerita atrata, *Lam.* = Nerita nigra, *Gray.*

90. *Neritina zealandica*, Recl., *not New Zealand (Polynesia).*

90. Turbo smaragdus, *Mart.* = Turbo helicinus, Born.

91. Turbo granosus, *Mart.* = Turbo granosus, *Mart.*

91. Turbo shandi, *Hutt.* = Astralium(?) shandi, *Hutt.*

91. *Turbo lajonkairii*, Desh., *not New Zealand (Indian Archipelago).*

91. *Turbo undulatus*, Chemn., *not New Zealand (Australia).*

92. Calcar cookii, *Lam.* = Astralium sulcatum, *Mart.*

92. „ davisii, *Stowe* = A. sulcatum, *var.* davisii, *Stowe.*

92. „ imperialis, *Lam.* = Astralium heliotropium, *Mart.*

92. Rotella zealandica, *H. and J.* = Ethalia zelandica, *H. and J.*

93. Anthora tuberculata, *Gray* = Trochus viridis, *Gmel.*

94. Anthora tritonis, *A. Ad.* = Trochus viridis, *Gmel.*

94. Anthora viridis, *Gmel.* = Trochus viridis, *Gmel.*

94. Anthora chathamensis, *Hutt.* = Trochus chathamensis, *Hutt.*

94. Anthora tiarata, *Q. and G.* = Trochus tiaratus, *Q. and G.*

95. *Clanculus variegatus*, Ad., *not New Zealand.*

95. Euchelus bellus, *Hutt.* = Euchelus bellus, *Hutt.*

95. Diloma æthiops, *Gmel.* = Monodonta æthiops, *Gmel.*

95. Diloma hectori, *Hutt.* = Monodonta corrosa, *A. Adams.*

96. Diloma undulosa, *Ad.* = M. corrosa, *var.* undulosa, *Ad.*

96. Diloma nigerrima, *Chemn.* = Monodonta coracina, *Troschel.*

96. Diloma corrosa, *Ad.* = Monodonta corrosa, *A. Adams.*

96. Diloma concolor, *Ad.* = Monodonta æthiops, *Gmel.*

96. Diloma gaimardi, *Phil.* = Monodonta lugubris, *Gmel.*

96. Trochocochlea subrostrata, *Gray* = Monodonta subrostrata, *Gray.*

96. Trochocochlea mimetica, *Hutt.* = Monodonta crinita, *Phil.*

97. Trochocochlea excavata, *Ad. and Ang.* = Monodonta excavata, *Ad. and Ang.*

97. *Chlorostoma niger*, Chemn., *not New Zealand.*

97. Thalotia conica, *Gray* = Cantharidus conicus, *Gray.*

98. Zizyphinus punctulatus, *Mart.* = Calliostoma punctulatum, *Mart.*

98. Zizyphinus granatum, *Chemn.* = Calliostoma tigris, *Mart.*

98. Zizyphinus spectabilis, *Ad.* = Calliostoma spectabilis, *Ad.*

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98. *Zizyphinus scitulus*, Ad., *not New Zealand (Australia).*
98. Zizyphinus selectus, *Chemn.* = Calliostoma selectum, *Chemn.*
98. Zizyphinus cunninghami, *Gray* = Calliostoma selectum, *Chemn.*
99. Cantharidus iris, *Gmel.* = Cantharidus iris, *Gmel.*
99. Cantharidus zealandicus, *Ad.* = Cantharidus iris, *Gmel.*
99. Cantharidus purpuratus, *Mart.* = Cantharidus purpuratus, *Mart.*
99. Cantharidus texturatus, *Gld.* = C. purpuratus, *var.* texturata, *Gld.*
100. *Cantharidus jucundus*, Gld., *not New Zealand.*
100. Cantharidus pallidus, *H. and J.* = Cantharidus purpuratus, *Mart.*
100. Cantharidus episcopus, *H. and J.* = Cantharidus pruninus, *Gould.*
100. Cantharidus huttoni, *Smith* = C. tenebrosus, *var.* huttoni, *Smith.*
100. Cantharidus pupillus, *Hutt.* = Cantharidus pupillus, *Hutt.*
101. Cantharidus tenebrosus, *A. Ad.* = Cantharidus tenebrosus, *A. Ad.*
101. Cantharidus rufozona, *A. Ad.* = Cantharidus rufozona, *A. Ad.*
101. Elenchus dilatatus, *Sow.* = Cantharidus dilatatus, *Sow.*
101. Bankivia varians, *Beck.* = Cantharidus varians, *Beck.*
102. Monilea egena, *Gould* = Monilea egena, *Gld.*
102. Gibbula sanguinea, *Gray* = Cantharidus sanguineus, *Gray.*
102. Gibbula simulata, *Hutt.* = Cantharidus dilatatus, *Sow.*
102. Gibbula nitida, *Ad. and Ang.* = Gibbula nitida, *Ad. and Ang.*
102. Gibbula inconspicua, *Hutt.* = Gibbula nitida, *Ad. and Ang.*
102. Gibbula oppressa, *Hutt.* = Trochus oppressus, *Hutt.*
103. Margarita antipoda, *H. and J.* = Gibbula antipoda, *H. and J.*
103. Margarita fulminata, *Hutt.* = Gibbula fulminata, *Hutt.*
103. " rosea, *Hutt.* = Gibbula rosea, *Hutt.*
103. " zealandica, *Sow.* = Monilea egena, *Gould.*
103. Scissurella mantelli, *Woodw.* = Scissurella mantelli, *Woodw.*
104. Haliotis iris, *Mart.* = Haliotis iris, *Mart.*
104. Haliotis rugoso-plicata, *Chemn.* = Haliotis rugoso-plicata, *Chemn.*
104. Haliotis gibba, *Phil.* = Haliotis virginea, *Chemn.*
105. *Haliotis zealandica*, Reeve, *not New Zealand(?).*

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105. Haliotis cruenta, *Reeve* = Haliotis rugoso-plicata, *Chemn.*
105. *Haliotis stomatiæformis*, Reeve, *not New Zealand (Australia).*
105. Fissurella squamosa, *Hutt.* = Fissurella squamosa, *Hutt.*
106. Lucapina monilifera, *Hutt.* = Megatebennus moniliferus, *Hutt.*
106. Emarginula striatula, *Q. and G.* = Emarginula striatula, *Q. and G.*
106. *Emarginula australis*, Q. and G., *not New Zealand (Australia).*
106. Tugalia parmophoidea, *Q.* and *G.* = Subemarginula parmophoidea, *Q. and G.*
106. Parmophorus unguis, *L.* = Scutum ambiguum, *Chemn.*
107. Patella magellanica, *Mart.* = Patella strigilis, *H. and J.*
107. Patella inconspicua, *Gray* = P. ornata, *var.* inconspicua, *Gray.*
107. Patella redimiculum, *Reeve* = P. strigilis, *var.* redimiculum, *Reeve.*
108. Patella reevei, *Hutt.* = Patella denticulata, *Mart.*
108 „ argyropsis, *Less.* = Patella radians, *Gmel.*
108. „ affinis, *Reeve* = P. radians, *var.* pholidota, *Less.*
108. „ pholidota, *Less.* = P. radians, *var.* pholidota, *Less.*
108. „ radians, *Gmel.* = Patella radians, *Gmel.*
109. „ denticulata, *Mart.* = Patella denticulata, *Mart.*
109. „ flava, *Hutt.* = P. radians, *var.* flava, *Hutt.*
109. „ antipodum, *Smith* = Patella tramoserica, *Mart.*
109. „ tramoserica, *Mart.* = Patella tramoserica, *Mart.*
109. „ stellularia, *Q. and G.* = Patella stellifera, *Chemn.*
109. „ stellifera, *Chemn.* = Patella stellifera, *Chemn.*
110. „ *stella*, Less., *not New Zealand.*
110. „ earlii, *Reeve* = P. radians, *var.* earlii, *Reeve.*
110. „ flexuosa, *Hutt.* = P. radians, *var.* earlii, *Reeve.*
110. „ rubiginosa, *Hutt.* = Acmæa lacunosa, *Reeve.*
111. Chiton pellis-serpentis, *Q. and G.* = Chiton pellis-serpentis, *Q. and G.*
111. Chiton sinclairi, *Gray* = Chiton sinclairi, *Gray.*
111. Chiton stangeri, *Reeve* = Chiton stangeri, *Reeve.*
111. *Chiton concentricus*, Reeve, *not New Zealand* (= Ch. jugosus, *Gld.*).
112. Chiton sulcatus, *Q. and G.* = Chiton limans, *Sykes.*
112. Chiton insculptus, *A. Ad.* = Chiton canaliculatus, *Q. and G.*
112. Chiton glaucus, *Gray* = Chiton quoyi, *Desh.*
112. Chiton æreus, *Reeve* = Chiton æreus, *Reeve.*
112. Lepidopleurus canaliculatus, *Q. and G.* = Chiton canaliculatus, *Q. and G.*

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113. *Lepidopleurus contractus*, Reeve, *not New Zealand.*
113. Lepidopleurus longicymbus, *Blainv.* = Ischnochiton longicymba, *Q. and G.*
113. Lepidopleurus circumvallatus, *Reeve* = Ischnochiton parkeri, *Sut.*
113. Lepidopleurus empleurus, *Hutt.* = Callochiton empleurus, *Hutt.*
113. *Lepidopleurus rudis*, Hutt., *not New Zealand.*
114. Tonicia undulata, *Q. and G.* = Onithochiton undulatus, *Q. and G.*
114. Tonicia rubiginosa, *Hutt.* = Acanthochit~~u~~es rubiginosus, *Hutt.*
114. Tonicia lineolata, *Fremly* = Onithochiton undulatus, *Q. and G.*
114. Tonicia atrata, *Sow.* = Plaxiphora subatrata, *Pilsbry.*
115. Acanthopleura cælatus, *Reeve* = Plaxiphora cælata, *Reeve.*
115. Chætopleura nobilis, *Gray* = Eudoxochiton nobilis, *Gray.*
116. Mopalia ciliata, *Sow.* = Plaxiphora suteri, *Pilsbry.*
116. Plaxiphora biramosa, *Q. and G.* = Plaxiphora biramosa, *Q. and G.*
116. Plaxiphora terminalis, *Smith* = Plaxiphora cælata, *Reeve.*
117. Acanthochites zealandicus, *Q. and G.* = Acanthochites zelandicus, *Q. and G.*
117. Acanthochites porphyreticus, *Reeve* = Acanthochites violaceus, *Q. and G.*
117. Acanthochites ovatus, *Hutt.* = Plaxiphora ovata, *Hutt.*
118. Acanthochites violacea, *Q. and G.* = Acanthochites violaceus, *Q. and G.*
118. Cryptoconchus porosus, *Burrow* = Acanthochites porosus, *Burrow.*
119. Carinaria australis, *Q. and G.* = Carinaria australis, *Q. and G.*
119. Buccinulus kirki, *Hutt.* = Actæon kirki, *Hutt.*
119. „ albus, *Hutt.* = Solidula alba, *Hutt.*
120. Bullina lineata, *Wood* = Bullinula scabra, *Gmel.*
120. Cylichna striata, *Hutt.* = Bullinella striata, *Hutt.*
121. Bulla oblonga, *Ad.* = Bulla autralis (*Gray*), *Q. and G.*
121. „ quoyi, *Gray* = Bulla quoyi, *Gray.*
121. Haminea zealandiæ, *Gray* = Haminea zelandiæ, *Gray.*
121. Haminea obesa, *Sow.* = Haminea zelandiæ, *Gray.*
122. Haminea acuticulifera, *Smith* = Haminea cuticulifera, *Smith.*
122. Akera tumida, *Ad.* = Akera tumida, *Ad.*
123. Philine angasi, *Crosse* = Philine aperta, *L.*
123. Aplysia brunnea, *Hutt.* = Tethys brunnea, *Hutt.*
123. „ venosa, *Hutt.* = Tethys venosa, *Hutt.*

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123. Aclesia glauca, *Cheesem.* = Notarchus glaucus, *Ch.*
124. Pleurobranchus ornatus, *Cheesem.* = P. ornatus, *Ch.*
124. Pleurobranchæa novæ-zealandiæ, *Cheesem.* = P. novæ-zealandiæ, *Ch.*
125. Doris punctata, *Q. and G.* = Doris punctata, *Q. and G.*
125. „ tuberculata, *Cuv.* = Archidoris tuberculata, *Cuv.*
126. „ granulosa, *Abrah.* = Doris granulosa, *Abrah.*
126. „ longula, *Abrah.* = Doris longula, *Abrah.*
126. „ muscula, *Abrah.* = Doris muscula, *Abrah.*
127. „ lanuginata, *Abrah.* = Doris lanuginata, *Abrah.*
127. „ wellingtonensis, *Abrah.* = Doris wellingtonensis, *Abrah.*
128. „ carinata, *Q. and G.* = Atagena carinata, *Q. and G.*
128. Acanthodoris mollicella, *Abrah.* = A. mollicella, *Abrah.*
128. „ globosa, *Abrah.* = A. globosa, *Abrah.*
129. Phidiana longicauda, *Q. and G.* = Facelina longicauda, *Q. and G.*
130. Dentalium zealandicum, *Sow.* = Dentalium zelandicum, *Sow.*
130. Dentalium pacificum, *Hutt.* = Dentalium zelandicum *Sow.*
131. Hyalea affinis, *d'Orb.* = Ca~~r~~volinia tridentata, *Forskål.*
132. Barnea similis, *Gray* = Barnea similis, *Gray.*
133. Pholadidea spathulata, *Sow.* = Pholadidea tridens, *Gray.*
133. „ tridens, *Gray* = Pholadidea tridens, *Gray.*
133. Teredo antarctica, *Hutt.* = Nausitora antarctica, *Hutt.*
134. Saxicava australis, *Lam.* = Saxicava arctica, *L.*
134. Panopæa zealandica, *Q. and G.* = Panopea zelandica, *Q. and G.*
134. Panopæa solandri, *Gray* = Panopea zelandica, *Q. and G.*
135. Corbula zealandica, *Q. and G.* = Corbula zelandica, *Q. and G.*
135. Corbula erythrodon, *Lam.* = Corbula erythrodon, *Lam.*
135. „ *adusta*, Hinds, *not New Zealand.*
135. „ haastiana, *Hutt.* = Corbula haastiana, *Hutt.*
136. Anatina tasmanica, *Reeve* = Cochlodesma angasi, *Crosse and Fischer.*
136. Lyo~~m~~nsia vitrea, *Hutt.* = Thracia vitrea, *Hutt.*
137. Neæra trailli, *Hutt.* = Cuspidaria trailli, *Hutt.*
137. Myodora striata, *Q. and G.* = Myodora striata, *Q. and G.*
137. „ plana, *Reeve* = Myodora brevis, *Sow.*
137. „ ovata, *Reeve* = Myodora subrostrata, *Smith.*
137. „ rotunda, *Sow.* = Myodora rotundata, *Sow.*
138. Chamostræa albida, *Lam.* = Chamostrea albida, *Lam.*
138. Mactra discors, *Gray* = Mactra discors, *Gray.*
138. „ murchisoni, *Desh.* = Mactra discors, *Gray.*
138. „ scalpellum, *Desh.* = Mactra scalpellum, *Desh.*
139. „ æquilateralis, *Desh.* = Mactra æquilateralis, *Desh.*

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139. *Mactra donaciformis*, Gray, *not New Zealand.*
139. Standella ovata, *Gray* = Standella ovata, *Gray.*
139. Standella elongata, *Q. and G.* = Standella elongata, *Q. and G.*
149. Standella notata, *Hutt.* = Standella elongata, *Q. and G.*
140. Zenatia acinaces, *Q. and G.* = Zenatia acinaces, *Q. and G.*
140. Zenatia deshayesi, *Reeve* = Zenatia acinaces, *Q. and G.*
140. Vanganella taylori, *Gray* = Resania lanceolata, *Gray.*
141. Raeta perspicua, *Hutt.* = Raeta perspicua, *Hutt.*
141. *Cæcella zelandica*, Desh., *not New Zealand.*
141. Psammobia stangeri, *Gray* = Psammobia stangeri, *Gray.*
142. Psammobia lineolata, *Gray* = Psammobia lineolata, *Gray.*
142. Psammobia zealandica, *Desh.* = Psammobia zealandica, *Desh.*
142. Psammobia affinis, *Reeve* = Psammobia affinis, *Reeve.*
142. Soletellina nitida, *Gray* = Solenotellina nitida, *Gray.*
142. " siliqua, *Reeve* = Solenotellina siliqua, *Reeve.*
143. " incerta, *Reeve* = Solenotellina incerta, *Reeve.*
143. " nitens, *Tryon* = Solenotellina incerta, *Reeve.*
143. Tellina alba, *Q. and G.* = Tellina alba, *Q. and G.*
143. " deltoidalis, *Lam.* = Tellina lactea, *Q. and G.*
143. " disculus, *Desh.* = Tellina disculus, *Desh.*
144. " subovata, *Sow.* = Tellina strangei, *Desh.*
144. " ticaonica, *Desh.* = Tellina ticaonica, *Desh.*
144. " strangei, *Desh.* = Tellina strangei, *Desh.*
144. " glabrella, *Desh.* = Tellina glabrella, *Desh.*
145. " radiata, *Desh.* = Solenotellina radiata, *Desh.*
145. Mesodesma novæ-zealandiæ, *Chemn.* = Mesodesma novæ-zealandiæ, *Chemn.*
145. Mesodesma ovalis, *Desh.* = Mesodesma novæ-zealandiæ, *Chemn.*
145. Mesodesma ventricosa, *Gray* = Mesodesma ventricosa, *Gray.*
146. Mesodesma lata, *Desh.* = Mesodesma ventricosa, *Gray.*
146. Mesodesma spissa, *Reeve* = Atactodea subtriangulata, *Gray.*
147. *Venus nodosa*, Dkr., *not New Zealand (West Africa).*
147. " oblonga, *Hanley* = Venus oblonga, *Hanley.*
147. " crebra, *Hutt.* = Venus crebra, *Hutt.*
147. Chione lamellata, *Lam.* = Venus lamellata, *Lam.*
147. " yatei, *Gray* = Venus yatei, *Gray.*
148. " stutchburyi, *Gray* = Venus stutchburyi, *Gray.*
148. " costata, *Q. and G.* = Venus costata, *Q. and G.*
148. " *lima*, Sow., *not New Zealand.*
148. " mesodesma, *Q. and G.* = Venus crassa, *Q. and G.*

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148. Chione gibbosa, *Hutt.*, *found fossil only.*
149. „ *paupercula*, Chemn., *not New Zealand (India).*
149. Callista multistriata, *Sow.* = Meretrix multistriata, *Sow.*
149. „ *disrupta*, Sow., *not New Zealand (Australia).*
150. Artemis australis, *Gray* = Dosinia australis, *Gray.*
150. „ subrosea, *Gray* = Dosinia subrosea, *Gray.*
150. „ lambata, *Gld.* = Dosinia lambata, *Gld.*
150. „ carpenteri, *Röm.* = Dosinia lambata, *Gld.*
151. „ grayi, *Zittel* = Dosinia grayi, *Zittel.*
151. Tapes intermedia, *Q. and G.* = Tapes intermedia, *Q. and G.*
151. *Tapes fabagella*, Desh., *not New Zealand.*
151. *Tapes galactites*, Lam., *not New Zealand.*
152. Venerupis reflexa, *Gray* = Venerupis reflexa, *Gray.*
152. „ paupercula, *Desh.* = Venerupis reflexa, *Gray.*
152. „ siliqua, *Desh.* = Venerupis siliqua, *Desh.*
152. „ elegans, *Desh.* = Venerupis elegans, *Desh.*
153. *Petricola serrata*, Desh., *not New Zealand.*
153. Cardium striatulum, *Sow.* = Cardium pulchellum, *Gray.*
154. Sphærium novæ-zelandiæ, *Desh.* = Sph. novæ-zelandiæ, *Desh.*
154. Sphærium lenticula, *Dkr.* = Sph. novæ-zelandiæ, *Desh.*
155. Pisidium novæ-zealandiæ, *Prime* = P. novæ-zealandiæ, *Prime.*
155. Lucina divaricata, *Lam.* = Divaricella cumingi, *Ad. and Ang.*
155. *Lucina lactea*, A. Ad., *not New Zealand (Australia).*
156. Diplodonta zealandica, *Gray* = Diplodonta zealandica, *Gray.*
156. Diplodonta globularis, *Lam.* = Diplodonta globularis, *Lam.*
156. Diplodonta striata, *Hutt.* = Diplodonta striata, *Hutt.*
157. Kellia cycladiformis, *Desh.* = Kellya cycladiformis, *Desh.*
x/ „ → 157. Solemya parkinsoni, *Smith* = Solenomya parkinsoni, *Smith.*
158. Crassatella obesa, *Ad.* = Crassatellites obesa, *Ad.*
158. „ bellula, *Ad.* = Crassatellites bellula, *Ad.*
158. Cardita australis, *Lam.* = Venericardia australis, *Lam.*
158. Cardita zealandica, *P. and M.* = Venericardia australis, *Lam.*
158. Cardita lutea, *Hutt.* = Venericardia compressa, *Reeve.*
158. „ *bimaculata*, Desh., *not New Zealand (Tasmania).*
158. „ *amabilis*, Desh., *not New Zealand*(?).
159. „ difficilis, *Desh.* = Venericardia difficilis, *Desh.*
159. „ purpurata, *Desh.* = Venericardia australis, *Lam.*
160. Mytilicardia excavata, *Desh.* = Cardita aviculina, *Lam.*
160. Unio menziesii, *Gray* = Diplodon menziesii, *Gray.*
161. „ aucklandica, *Gray* = Diplodon menziesii, *Gray.*

x/ 157. Pythina stowei, Hutt. = Mylitta stowei, Hutt.

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161. Unio zelebori, *Dkr.* = Diplodon zelebori, *Dkr.*
161. „ hochstetteri, *Dkr.* = D. menziesii, *var.* hochstetteri, *Dkr.*
161. „ lutulentus, *Gld.* = Diplodon lutulentus, *Gld.*
162. Barbatia decussata, *Sow.* = Arca decussata, *Sow.*
162. „ pusilla, *Sow.* = Arca reticulata, *Chemn.*
163. Pectunculus laticostatus, *Q. and G.* = Glycymeris laticostata, *Q. and G.*
163. Pectunculus flammeus, *Reeve* = Glycymeris laticostata, *Q. and G.*
163. Pectunculus striatularis, *Lam.* = Glycymeris striatulare, *Lam.*
164. Nucula nitidula, *A. Ad.* = Nucula nitidula, *A. Ad.*
164. „ strangei, *A. Ad.* = Nucula strangei, *A. Ad.*
164. „ sulcata, *A. Ad.* = Nucula lacunosa, *Hutt.*
164. „ castanea, *A. Ad., doubtful for New Zealand.*
164. „ *striolata*, A. Ad., *not New Zealand (China).*
165. „ *grayi*, d'Orb., *not New Zealand (South America).*
165. Leda concinna, *A. Ad.* = Leda concinna, *A. Ad.*
165. „ fastidiosa, *A. Ad., doubtful for New Zealand.*
165. „ micans *A. Ad., doubtful for New Zealand.*
166. Solenella australis, *Q. and G.* = Malletia australis, *Q. and G.*
166. Mytilus magellanicus, *Lam.* = Mytilus magellanicus, *Lam.*
167. Mytilus polyodontes, *Q. and G.* = Mytilus magellanicus, *Lam.*
167. Mytilus latus, *Chemn.* = Mytilus latus, *Chemn.*
167. „ edulis, *L.* = Mytilus edulis, *L.*
167. „ ater, *Frfld.* = Volsella ater, *Frfld.*
168. Crenella impacta, *Herm.* = Crenella impacta, *Herm.*
168. Modiola australis, *Gray* = Volsella australe, *Gray.*
168. „ areolata, *Gld.* = Volsella australe, *Gray.*
168. „ fluviatilis, *Hutt.* = Volsella fluviatilis, *Hutt.*
168. Lithodomus truncatus, *Gray* = Lithophagus truncatus, *Gray.*
169. *Lithodomus gruneri*, Reeve, *not New Zealand (West Africa).*
169. Pinna zealandiæ, *Gray* = Pinna zealandiæ, *Gray.*
169. *Avicula glabra*, Gld., *not New Zealand.*
170. „ *fucata*, Gld., *not New Zealand.*
170. Pecten zealandiæ, *Gray* = Pecten zelandiæ, *Gray.*
170. Pecten gemmulatus, *Reeve* = Pecten zelandiæ, *var.* gemmulata, *Reeve.*
171. Pecten multicostatus, *Reeve* = Pecten zelandiæ, *Reeve.*
171. „ *pica*, Reeve, *not New Zealand.*
171. „ australis, *Sow.* = Pecten asperrimus, *Lam.*
171. „ radiatus, *Hutt.* = Pecten radiatus, *Hutt.*

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171. Pecten vellicatus, *Hutt.* = Pecten convexus, *Q. and G.*
171. Vola laticostatus, *Gray* = Pecten laticostatus, *Gray.*
172. Lima zealandica, *Sow.* = Lima zealandica, *Sow.*
172. „ angulata, *Sow.* = Lima angulata, *Sow.*
172. „ japonica, *A. Ad.* = Lima bullata, *Born.*
173. *Plicatula novæ-zealandiæ*, Sow., *not New Zealand.*
173. Anomia stowei, *Hutt.* = Anomia stowei, *Hutt.*
173. „ alectus, *Gray* = Anomia alectus, *Gray.*
174. „ cytæum, *Gray* = Anomia cytæum, *Gray.*
174. Placunanomia zealandica, *Gray* = Placunanomia zelandica, *Gray.*
174. Placunanomia ione, *Gray* = Placunanomia ione, *Gray.*
175. Ostrea edulis, *L.* = Ostrea angasi, *Sow.*
175. „ *discoidea*, Gld., *not New Zealand.*
175. „ glomerata, *Gld.* = Ostrea glomerata, *Gld.*
175. „ reniformis, *Sow.* = Ostrea reniformis, *Sow.*

BRACHIOPODA.

176. Waldheimia lenticularis, *Desh.* = Magellania lenticularis, *Desh.*
176. Terebratella cruenta, *Dillw.* = Terebratella cruenta, *Dillw.*
177. Terebratella rubicunda, *Sol.* = Terebratella rubicunda, *Sol.*
177. Magas evansii, *Davidson* = *young of* Terebratella cruenta.
177. Waltonia valencienni, *Davidson* = *young of* Terebratella rubicunda.
178. *Bouchardia cumingi*, Davidson, *not New Zealand.*
178. *Kraussia lamarckiana*, Davidson, *not New Zealand.*
178. Rhynchonella nigricans, *Sow.* = Hemithyris nigricans, *Sow.*

DESCRIPTION OF A NEW SPECIES OF SEPARATISTA FROM NEW ZEALAND.

BY HENRY SUTER.

Lippistes (= **Separatista**) **benhami**, n. sp.

SHELL small, fragile, subdiscoidal, with a very short spire and broadly-expanded aperture, cancellated, and with deep umbilicus. Colour yellowish-white, semi-transparent, flinty. Pullus consisting of 1½ whorls, which are smooth and glossy. Spire very low, conoidal. Whorls 3, rapidly increasing, body-whorl with a flat shoulder and distinct angle, the larger lower portion strongly convex. Suture first impressed, then, on reaching the aperture, channelled. Spiral ornamentation, consisting of numerous distinct threads, about 12 on the body-whorl, but bifurcating and thus increasing in number on reaching the lip; in the shallow grooves between the riblets there is a fine median thread, recognisable only under the lens. Axial ornamentation represented by numerous, broad, rounded sinuated costae, which become more pronounced and more distant towards the aperture; points of intersection granulate. Fine equidistant and numerous incremental lines cross the spiral threads. Aperture widely expanded, oval, straight above, subangulated at the base. Outer lip patulous throughout, sharp, sinuated below the angle. Inner lip subvertical, slightly concave in the whole length, broadly reflected, continuous with the outer lip and very slightly detatched from the penultimate whorl. Umbilicus not broad, but deep and carinated by the lowest spiral riblet. Operculum ?

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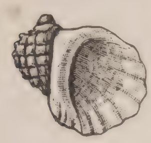

Height 6. 5 ; breadth 7 millim. Aperture : height 6 ; breadth 6 millim.

Hab.—Cape Maria van Diemen, New Zealand.

Type in the Otago University Museum, Dunedin, New Zealand.

This interesting little shell was found by Mr. Rayner, formerly lighthouse keeper at Cape Maria, and sent to Prof. Benham, the curator of the Dunedin Museum, who kindly handed the specimen over to me for description. I have very great pleasure in associating the name of our distinguished scientist with the species.

The unique specimen is most likely not quite adult, and therefore has the last whorl but very little disunited. The genus *Separatista* is new to the fauna of New Zealand. The species is nearly allied to *S. separatista*, Dillw., and perhaps *S. grayi*, Ad., but may at once be distinguished by the beautiful and complicated sculpture.

Hedley[1] suggests that "*Trichotropis gabrieli*, P. and G., *T. grazilenta*, Braz., and *T. torcularis*, T. Woods, may conveniently be distinguished from the typical northern *Trichotropis*, and assembled under *Separatista.*" I fully share Mr. Hedley's opinion with regard to the forms mentioned by him, but there is one stumbling block in the way as far as New Zealand is concerned, and this is *Trichotropis inornata*, Hutton (=*clathrata*, Sow.). If *Trichotropis* is an exclusively northern genus, the question arises : What is *inornata*? It is quite true that the membranaceous fringes of *Trichotropis* are wanting, but otherwise the shell has all the characters of that genus, and I cannot make up my mind to class it under *Separatista.* The species of the latter genus seem to be exceedingly variable, but to include our *T. inornata* would necessitate reforming Gray's diagnosis of *Separatista* to such an extent, that it would almost become a synonym of *Trichotropis.* So far as I can ascertain, the operculum and the animal of *Separatista* are unknown, and the same is the case with *T. inornata*, so that with the little knowledge that we possess at the present time we have to admit the occurrence of *Trichotropis* not only in the northern, but also in the southern hemisphere. It is represented by about seven species in Japan, and there seems to be no reason why it should not also be found in New Zealand.

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1. Records Australian Museum, Vol. iv, No. 3, p. 126.